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JOURNAL

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ASIATIC SOCIETY OF BENGAL.

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1. The Vikramasilá Monastery.

By Nundolal Dey.

The Vikramasilá vihára was the latest Buddhist University in the kingdom of Magadha, the modern province of Bihar. It is said to have been founded by King Dharma-pála. Almost all the authorities agree that Dharma-pála was the second king of the Pala dynasty. But according to the Bhagalpur and Monghyr plates he was the son of Go-pála, according to the Dinajpur plate he was the son of Loka-pala, and according to Abul Fazl, who has got Dhira-pála instead of Dharma-pála, he was the successor of Bhu-pála. It is therefore evident that Go-pála, Bhu-pála and Loka-pála were names of the same king, the first of the Pála dynasty.

According to Mr. Vincent A. Smith, Go-pála became the ruler of Bengal about 815 A.D., and he is said to have reigned forty-five years, or in other words from 815 to 860 A.D., and yet he states that Deva-pála, the third king of the Pála dynasty and consequently the successor of Dharma-pála, reigned from 853 to 893 A.D.[1] The discrepancy is patent on the face of these statements, and no period has been assigned for the reign of the second king Dharma-pala. Dr. Rajendralála Mitra concludes that Go-pála ascended the throne in 855 A.D., and he assigns 20 years to each reign of his successors. Hence, according to him, Dharma-pála ascended the throne in 875, and his successor Deva-pála in 895 A.D.[2] According to these two authorities, therefore, Dharma-pála reigned in the latter half of the ninth century of

[1] Early History of India, 1904, p. 318.
[2] Indo-Aryans, vol. ii, p. 232.

the Christian era. No dates being mentioned in the plates in which the names of these kings occur, except with regard to Mahi-pála, Dr. Rajendralála was obliged to adopt the average of periods and reigns of the kings of other countries in order to fix the dates of the kings of the Pála dynasty. The adoption of the average may do very well for the purpose of constructing history, but particular facts do not tally with these conjectural dates. It is stated that the Vikramasilá vihára was founded by Dharma-pála, and hence it must have been founded in the latter half of the ninth century. The *Swayambhu Purána*, however, mentions the name of Vikramasilá vihára. From the colophon of this work it appears that the book was written or copied in Samvat 919 corresponding to 862 A.D.[1]

According to Dr. Rajendralála therefore Dharma-pála must have founded the monastery before he ascended the throne in 875 A.D. If it was founded in the middle of the ninth century, then it certainly could not have been mentioned in a work written about that period, as some time must be allowed to elapse before an institution can acquire a celebrity.

I would cite another instance in connection with the Vikramasilá vihára, where the fact also militates against the conclusion arrived at by the application of the principle of average. Dipankara Srijnána *alias* Atisa, the Hierarch of Magadha and High Priest of the Vikramasilá vihára, was invited by the Thibetan King Lha Lama Ye-Shes-Od to reform the Buddhism of Thibet which had become debased by the admixture of Tántrik and Bon mysticism. He arrived at Thibet in 1038 A.D.[2] Nag-tcho, who was sent by the king as an envoy to invite the priest, did not return to Thibet till more than three years after his arrival in India. He therefore came to India in 1034, while Naya-pála, the son of Mahi-pála, was reigning in Magadha which included Bengal. Dipan-kara also on his way to Thibet in the company of Nag-tcho, wrote to King Naya-pála from Nepal an epistle which is still known by the name of *Bimala-ratna-lekhana*.[3] Hence it is evident that Naya-pála was reigning in Magadha at least from 1034. But according to Dr. Rajendralála, he did not assume the sovereignty till six years after the arrival of Nag-tcho in India, that is in 1040.[4]

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[1] "सम्वत् ९१९ । पौषकृष्ण ११ खषुकुधूंकाञ्जर ॥ शुभमस्तु सर्व्वदा । स्वपुचौ-जगत्लक्ष्मीनामधेयायौ स्वर्गंगतार्थं दुर्गतिमोचनसद्गतिप्राप्तिकामनार्थं इदं सुपुष्टकं स्वयम्भुपुराणं मुदा लेखयामि । तस्य पुन्यास्यानुभावात् भद्रं भवन्तु सर्व्वजगतां भुयमन्तु सदा शुभं । लिखित वजधृत् चक्रमहाविहारधिष्ठित जगद्गुरुसागर ।"

[Swayambhu Puránam, published by the Asiatic Society of Bengal.]

[2] Dr. Waddell's Buddhism of Thibet. pp. 35, 36 and notes.

[3] Indian Pandits in the Land of Snow, pp. 57, 71, by Babu Saratchandra Das, C.I.E.; Dr. Waddell's Buddhism of Thibet.

[4] Indo-Aryans, vol. ii, p. 262.

The inevitable inference that should be drawn from these discrepancies is that either the chronology of the Pála kings should be re-adjusted or the foundation of the Vikramasilá vihára should be ascribed not to Dharma-pála, but to his father Go-pála who is described in the plates as a "devout Buddhist" and "pious king," and who is said to have embellished his capital Odantapuri or Udaṇḍapura, which has been identified with the modern town of Bihar,[1] with a magnificent vihára. But we need not resort to the latter alternative or do violence to the accepted opinion of the Vikramasilá vihára being founded by Dharma-pála. General Cunningham must have perceived the absurdity to which we are landed by placing the accession of Go-pála in the middle of the ninth century. He therefore adopted the average of 25 years to a reign which placed the assumption of sovereign power of Bengal by Go-pála in the latter half of the eighth century. But with this even he was not satisfied; he therefore stretched each regal period to 30 years, and thus brought the accession of Go-pàla to the early part of the eighth century. He says, "Assigning 25 years to a generation and working backwards from Mahi-pála, the accession of Go-pála, the founder of the dynasty, will fall in the latter half of the eighth century, or still earlier, if we allow 30 years to each generation. By either reckoning, the rise of the Pála dynasty of Magadha is fixed to the eighth century A.D., at which time great changes would appear to have taken place amongst most of the ruling families of Northern India."[2] It is enough for our purpose we have got General Cunningham's authority that Go-pála became ruler in the first half of the eighth century A.D., and therefore we can place the accession of his son Dharma-pála in the middle of the eighth century A.D., or a little later.

It is therefore very probable that the Vikramasilá vihára was founded in the middle of the eighth century or about that time. We cannot, for any reason, place the foundation of the monastery anterior to the period of the Pála kings of Magadha, that is, beyond the eighth century of the Christian era. Hiuen Tsiang and I-tsing have not at all mentioned the name of Vikramasilá vihára, which they would have certainly done had it existed in the seventh century when they visited India. Hence the circumstances also show that the Vikramasilá vihára was founded by Dharma-pála about the middle of the eighth century. Though we do not know the actual period of his reign, yet it appears from an inscription discovered at Khalimpur near Gour that Dharmapála reigned at least for 32 years.[3]

It is mentioned in the Buddhist chronicles that the Vikramasilá monastery was situated on a bluff hill on the right bank of the river Ganges in the province of Magadha. It contained six gates and a large open space which could hold an assembly of

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1 Arch. Report, vol. viii.
2 Arch. Survey Report, vol. iii, p. 135.
3 Journal of the Asiatic Society of Bengal, vol. lxiii, part I

8,000 persons, as was observed by Nag-tcho on the next day after his arrival at the monastery. There were apparently easy means for ascending the hill, perhaps flights of steps led up to it, for when a stranger arrived in the night, he felt no difficulty in climbing the hill, though perhaps he could get no admittance, the gates being closed for the night; but there were Dharmasálás or rest-houses outside the gates for the accommodation of such travellers.[1] There can be no doubt that the Vikramasilá vihára was a magnificent building, and it was so nicely adapted to the purpose for which it was constructed, considering it both as a religious and an educational institution, that the Thibetans took it as a model for the construction of their own monasteries. Every branch of learning including the sciences, especially the science of medicine, was taught and encouraged, and particular care was taken to teach the Mádhyamika and Yogachárya doctrines of the Mahávyána system of Buddhism as well as other systems of philosophy. The primitive Buddhist religion, which represented the highest culture of the moral faculties and which in its metaphysical side was too abstruse for the comprehension of the common people, assumed a new phase in the fifth century A.D., and converged into Tántrikism which greatly developed between the eighth and tenth centuries of the Christian era when the kings of the Pála dynasty reigned over Bengal and Bihar, and the Vikramasilá monastery became the famous centre for the inculcation of the Tántrika doctrines. There were altogether one hundred and seven temples within the compound, and the superiors of the monastery were all Mantra-vajrácháryas. People from various parts of India and also from countries beyond the limits of India resorted to this seat of learning for receiving instruction. It contained six colleges and one hundred and eight teachers. Even the gate-keepers were the Pandits or learned men of India; no one could enter the precincts of this seat of learning without first defeating them in controversial disquisitions.[2] The object was evidently to discourage promiscuous admission of students into the colleges of this university, those persons only were admitted who had become adepts in particular branches of learning by studying elsewhere, and in this respect it appears to have followed the practice in vogue in the Nálandá monastery as recorded by Hiuen Tsiang.[3]

The first abbot (*adhinávka*) of the Vikramasilá monastery at the time of Dharma-pála was Sribuddha Jnánapáda. Dipankara Srijnána was appointed High Priest of the monastery by Naya pála.[4] He was considered by the Thibetan king as the only person in India who was eminently fitted by his learning to

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[1] Indian Pandits in the Land of Snow, p. 58; Journal of the Indian Buddhist Text Society, 1893.

[2] Dr. Kern's Manual of Indian Buddhism, p. 133. Professor Satischandra Vidyábhusana: *Bikramasilá Biswavidyálaya* in the *Bhárati*, Baisákh, 1315; *Sáhitya*, 1314 (Srában), p 236.

[3] Beal's Records of Western Countries, vol. ii, p. 171.

[4] Indian Pandits in the Land of Snow, p. 39.

reform the degenerated Buddhism of Thibet. He started the Lamaist Reformation in 1038. At the latter end of the twelfth century when the province of Bihar was conquered by Muhammad Bakhtyar Khiliji,[1] the Bikramasilá vihára was destroyed by the Mahomedans. The monks were killed or they fled to other countries.[2] This event took place during the reign of Indradumnya who is supposed by General Cunningham and Buchanan to have been the last of the Pála kings of Magadha,[3] when Sákyasri was the High Priest of the monastery, who fled to Orissa and afterwards to Thibet.

Now, the question is where was the Vikramasilá Sanghárama? So far as I am aware no serious attempt has been made to fix the locale of this distinguished monastery. General Cunningham suggests that Siláo, a small village three miles to the south of Bargáon (the ancient Nálandá) and six miles to the north of Rájgir, the ancient capital of Magadha, in the subdivision of Bihar in the district of Patna, was the ancient Vikramasilá.[4] No doubt there is a large mound of earth at Siláo, which is being gradually encroached upon by the cultivators and which is perhaps the remains of a stupa or monastery. But the suggestion must be objected to on several grounds. Vikramasilá vihára, as I have stated, was situated on a hill on the right bank of the Ganges. The river Ganges, however, never flowed by the side of Siláo. The village was situated before on the bank of the river Panchán which has now receded to some distance. The mound is situated upon the level ground and not upon any hill, and there is no hill even close to the village. Then again its distance from ancient Nálandá, which is only three miles, precludes us from believing that the Vikramasilá monastery should have been constructed so close to this famous seat of learning, which in the eighth century was in the highest pitch of its glory.

The next attempt at identification that has been made is by Mahámahopádhyáya Satischandra Vidyábhusana. He identifies Vikramasilá Sanghárama with Sultanganj in the district of Bhagalpur.[5] But the learned Professor has assigned no reasons for this identification. No amount of assertion can prove the

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[1] According to Major Raverty the name of the conqueror of Bengal and Bihar was Muhammad, the son of Bakhtyar (Muhammad *bin* Bakhtyar) and not Muhammad Bakhtyar. He fixes upon 589 A.H., or 1193 A.D., as the year when Bihar was conquered by him (Translation of the Tabaqat-i-Nasiri). Mr. V A. Smith has followed Major Raverty on both these points. Dr. Blochmann doubts the authority cited by Major Raverty and his conclusion (Journ. Asiatic Soc. Bengal, 1871, p. 275—*History and Geography of Bengal*). He says that Bengal was conquered in the second year after the conquest of Bihar, and places the conquest of Bengal in 594 A.H., or 1198-99 A.D., and not in 1202-3 A D., as fixed upon by Mr. Thomas. According to Mr. Stewart. Bihar was conquered by Muhammad Bakhtyar about 596 A.H. (596+622−18=1200 A.D.) or 1199 A D (History of Bengal).

[2] Dr. Kern's Manual of Indian Buddhism, p. 133.

[3] Arch Rep., vol. iii; Buchanan's Eastern India, vol. ii, p. 26.

[4] Arch. Report, vol. viii, p. 83.

[5] *Bhárati*, Baisákh, 1315.

identity of the Buddhist Vihára, the remains of which exist at Sultanganj "in the space between the mart and the railway station," with the Vikramasilá Vihára, as it was not situated upon a hill, and it appears to have been established "probably at the beginning of the Christian era or even earlier."[1] Some of the basaltic images discovered at this place were even inscribed with the Gupta character of the third and fourth centuries, whereas the Vikramasilá Vihára was not founded till the eighth century of the Christian era.[2] By Sultanganj he evidently means the hill in the midst of the river Ganges upon which the temple of Gaibinátha Mahádeva is situated. But this identification is also open to objections on many grounds. Vikramasilá Sangháráma, as I have stated, was a Buddhist monastery situated on a hill on the right bank of the Ganges with space enough for holding a gathering of many thousands of people. Any identification, therefore, before it can be pronounced to be correct, must satisfy all these conditions. The hill, though situated in front of Sultanganj, is very close to the village Janghirá where the Pándás (priests) of Gaibinátha Mahádeva reside, and the hill itself is also called Janghirá—the Zanghera of Mr. Montgomery Martin. "It consists," in the expressive language of Mr. Martin. "of several masses of grey granite, heaped one upon the other in an irregular manner, forming ledges and terraces, which have become the sites of numerous temples."[3] Cliffs and crags project upwards from the sides in graceful confusion, and all these are carved with the figures of Nrisinha Deva, Surya, Hanumána and other gods of the Hindu pantheon. There is nothing to show that the place was ever used by the Buddhists, and there is no Buddhist sculpture at all. The place is entirely Hindu. According to Hindu tradition it was the hermitage of Jahnu Rishi who is said to have quaffed off the Ganges in a single draught when disturbed in his worship by the torrent of the river. There is no trace even of the name of Vikramasilá in the name of the hill or any village about this place, Janghirá being a corruption of Jahnu-griha (house of Jahnu) according to General Cunningham,[4] or Jahnu-giri (hill of Jahnu) according to Dr. Rajendralála Mitra,[5] which name has got no connection whatever with the emperor Jahangir as it has been supposed by some writers. Then, again, the Janghirá or Gaibinátha hill is not situated on the right bank of the Ganges, but the river flows by the both sides of it. No doubt in ancient time it was connected with the mainland by an isthmus of rock, but the river must have taken centuries upon centuries in its ceaseless course towards the sea to wear off this connection and make the hill isolated long before the erection of the Vikramasilá vihára was

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1 On the Buddhist Remains of Sultangnnj by Dr. Rajendralala Mitra.
2 Bholanauth Chunder's Travels of a Hindoo, vol. i, p. 103 *et. seq.*
3 Montgomery Martin's Indian Empire, vol. iii.
4 Arch. Survey, Reports, vol xiv, p 20.
5 Journ. Asia. Soc. Bengal, 1883, p. 175, note :—*On the Temples of Deoghar.*

even thought of. The hill is a very small one, too small to have a monastery with six gates and a quadrangle or open space which could hold an assembly of 8,000 men, and also the large number of temples and colleges it contained. The ledges and terraces mentioned before, which are not on the same level, cannot hold even twenty men at a time. All these circumstances clearly prove that the identification of Vikramasilá with the Gaibinátha hill can not at all be correct.

A day's sail below Sultanganj is situated a projecting steep hill called Páthargháṭá which is a spur of the Colgong range. It is about six miles to the north of Colgong, twenty-four miles to the east of Bhagalpur, and twenty-eight miles to the east of Champánagar, the ancient Champá, the capital of Anga. The rocky projections at Páthargháṭá and Colgong form a beautiful curve on the right bank of the Ganges flanked by an amphitheatre of hills, which greatly enhances the picturesqueness of the landscape and heightens its beauty. The river Ganges, the general course of which from Bhagalpur to the ocean is nearly due east, flows northward from Colgong to Páthargháṭá and takes a singular turn round the Páthargháṭá hill, some of the rocks of which p oject in a promontory into the river, and this projecting portion with a large part of the hill behind is properly called Páthargháṭá. The approach to Pathargháṭá from the Colgong side is guarded by bristling crags and large boulders of rocks jutting up from the bed of the river, which are carved with the effigies of Pauránik gods and goddesses. From the brink of the river a broad flight of steps cut into the rock leads up to the projecting portion of the hill, where on a level terrace on its southern side below a banian tree is situated a temple of Mahádeva called Baṭeswaranátha. To the east of the temple is a spacious cave cut in the hill with a low doorway, on both sides of which are raised masonry platforms upon which have been kept arranged many stone statues and *terra cotta* figures of gods and goddesses of the Tántrika-Buddhistic pantheon, as of Tárá, the consort of Amoghaśiddhi [1] or of Avalokiteswara,[2] of Akshobya, one of the five Dhyáni Buddhas, and so forth, and also some phallic images of Mahádeva. On the court-yard of the temple also, just below the platforms, may be seen similar statues. These statues are of course not *in situ*, but they must have been removed there from the other parts of this place. Some of these images contain inscriptions in the Kutila character which was in use between the eighth and twelfth centuries of the Christian era. On the southern side also may be seen similar excavations in the rock, and a vast extent of rocky plain covered with the debris and remains of ancient buildings. The debris formerly covered an area of more than 150 bighás or over 50 acres of land, a large portion of which has now been brought under cultivation. Two places called Antichak and Buddhásana which are contigu-

[1] Hodgson's Literature and Religion of the Buddhists.
[2] Dr. Waddell's Buddhism of Thibet, p. 358.

ous to this spot and which also contain many ancient remains, apparently formed a part of the compound of the religious establishment of Pátharghátá. There are altogether seven caves cut out of the solid rock, the chisel marks being still visible.[1] Almost all of them contain niches in the middle of the walls to hold the images of the deities just fronting the low narrow doorways. Some of these rock-cut caves are 11 feet in length by 10 feet in breadth. One of them is 21 feet 10 inches in length by 9 feet 9 inches in breadth, and it is divided into three compartments. There is another cave called Pátálpuri, and not "Putulpuri or the Idol house" as stated by Major Francklin: it is like a subterranean passage containing alcoves at intervals on both sides of it, but it is so dark and so infested with bats that no one ventures to go beyond 18 or 20 feet. The height of the doorways of these rock-cut caves ranges from 2 feet to 5 feet, and the width from 2 feet 7 inches to 4 feet, only one of them is 7 feet 7 inches in width. On the western border of these ruins may yet be seen images of Buddha *in situ* on narrow dilapidated plinths with two or more small stone pillars on their sides, which have got now nothing to support I noticed two or three such small fanes on the same row which prove that they belonged to the private cells or chapels of the monks. Owing to the growth of underwood and luxuriant vegetation, it is difficult to trace out the paths or means of ascent which must have existed from the other sides of the hill.

Some of the images, I was told, were removed from Pátharghátá to Colgong by Mr. C. H. Burnes, the quondam manager of a European firm who subsequently became a landed proprietor. These images may still be seen in the "Hill-house" of Colgong—a house which he built upon a hill close to the Railway Station as a guest-house. Among them I observed some votive stupas, a big statue of Avalokiteswara, a large seated figure of Buddha as a preacher, which pose is indicated by the collected and clinching fingers and thumbs of the upraised hands as if some tough point in the course of argument is being explained, and some broken statues These statues were exquisitely sculptured. The Gándhára and the Nálandá státues have always been celebrated as the best of their kind: the former are characterised by gracefulness and tasteful execution, and the latter by their beautiful design and artistic value. I never expected to find such

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[1] See also the following description of the place in the *Uttara Purána*:—

गङ्गाचोत्तरवाहिनी वटतटे यष्यानमध्यस्थिते ।
किञ्चित्पश्चिमवाहिनी गिरिगुहास्थानानि सिद्धेश्वरः ॥
तत्रास्ते वटमूलसंभवशिवः संज्ञावटेशोजगत् ।
महात्म्यं किं बहुविधिकथनं दर्शनादेव मोक्ष ।

(Uttara Purána as quoted in Major Francklin's *Site of Ancient Palibothra.*)

statues elsewhere, and consequently I was surprised to see that these statues were in no way inferior to those of Nálandá. Some years ago Mr. Skrine, the District Magistrate and Collector of Bhagalpur, obtained from the ruins at Pátharghátá a beautiful lotus made of silver, containing eight petals which could be opened or closed by means of a spring: it has, I understand, been sent to the Museum of the Asiatic Society of Bengal.

There can be no doubt therefore that these ruins at Pátharghátá are the ruins of a Buddhist monastery.

Hiuen Tsiang while visiting Champá in the seventh century gives the following description of the place: "To the east of the city [Champá] 140 or 150 li [28 or 30 miles] on the south of the river Ganges, is a solitary detached rock, craggy and steep, and surrounded by water. On the top of the peak is a Deva temple: the divine spirits exhibit many miracles here. By piercing the rock, houses have been made; by leading the streams (through each), there is a continual flow of water. There are wonderful trees (forming) flowering woods; the large rocks and dangerous precipices are the resort of men of wisdom and virtue; those who go there to see the place are reluctant to return."[1] General Cunningham says with reference to this: "From the description it is easy to recognize the picturesque, rocky island opposite Pátharghátá with its temple-crowned summit."[2] From this statement it is clear that the General never visited Pátharghátá personally. But there can be no doubt whatever from the fact of Hiuen Tseang's mentioning the rock-cut caves and stating the distance of the place from Champá that he gave a description of Pátharghátá itself, which, however, is not a "detached rock surrounded by water," but a rocky projection which has got the Ganges on its three sides. There is no "island opposite Pátharghátá with its temple-crowned summit" as stated by General Cunningham, but Pátharghátá itself is crowned with temples.

Two things are very clear from the aforesaid description of Hiuen Tsiang: first, that Pátharghátá in the seventh century was a sacred place of pilgrimage to the Hindus: it had a Hindu temple on the top of it. The Buddhist monastery of which we now see the remains did not exist at that time, otherwise Hiuen Tsiang would not have failed to allude to it. Secondly, that the rock-cut caves which may still be seen, existed at the time of Hiuen Tsiang, and hence they are the work of the Brahmins and not of the Buddhists. It is therefore not always safe to ascribe all rock-cut caves to the Buddhists, for the Brahmins must have excavated the Pátharghátá caves long before the seventh century. In many places, as in Gayá and Orissa, we find Buddhist monasteries and temples appropriated by the Hindus,[3] but in Pátharghátá Hindu shrines and other sacred places were appropriated

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[1] Beal's Records of the Western Countries, vol. ii, p. 192.

[2] Cunningham's Ancient Geography of India, p. 477.

[3] Dr. Rajendralála Mitra's Buddha-Gayá and Antiquities of Orissa, vol. ii, p. 148.

by the Buddhists. It appears therefore that Páthargháṭá must have been a place of great sanctity both to the Hindus and the Buddhists.

But the question is what was the ancient name of Páthargháṭá? There is no tradition. The Brahmins who look after the worship of Baṭeswaranátha assert that the god and the temple have been existing there for ages; but some say that the temple of Baṭeswaranátha and that of the goddess Káli in front of it were constructed by the Rájá Gaḍamardana or Gandhamardana, whose capital was situated at a distance of two miles from Páthargháṭá. The people of the surrounding country can not say what the ancient name of the place was. Two miles to the south of Páthargháṭá, that is about midway between the latter place and Colgong, on the highest peak of a limestone hill called the Khalli-pahár, there is a temple which is pointed out as the Durvásá-ásrama or the hermitage of Rishi Durvásá, and Colgong, which is locally called Kahalgáon, is a corruption of Kalahagráma from the pugnacious character of the Rishi. But this circumstance does not elucidate the ancient name of Pátharghátá. The *Agni Puráṇa* mentions indeed the name of "Baṭesa" as a place of pilgrimage,[1] but from the context its position can not be ascertained: it may either mean Baṭesa of the *Uttara Puráṇa*,[2] that is the Baṭeswaranátha of Páthargháṭá, or it may mean "Baṭeswara," the "undecaying banian tree" of Prayága (Allahabad).[3] But it should be borne in mind that the present temple of Baṭeswaranátha is of recent date: hence the "Deva temple" of Hiuen Tsiang might not have been that of Baṭeswaranátha. But Major Francklin in his search for the site of Palibothra (Páṭaliputra) in 1811 and 1812 has left a remark which gives us some clue as to its ancient name. He says, "Páthargháṭá in Sanskrit is called *Silá-Sangam*, which signifies the union or junction near the rocks, a characteristic which this spot, strewed over with huge and shapeless masses of rock, sufficiently exhibits. Its modern appellation signifies the *Stone-Ghaut* or landing place. A small distance up the hill Baṭeswar is a temple dedicated to Mahádeva, the avenging power: still higher up near the summit is another called *Putul Puri* or the Idol House."[4] It is therefore clear that the "Sanskrit" name, by which Major Francklin means, as it appears from the context by its contradistinction to "modern appellation," the ancient name of Páthargháṭá was *Silá-Sangama*. He also quotes a *sloka* in original Sanskrit from a poem called *Chora-panchásiká* by Chora Kavi, which mentions the name of "Silá-Sangama, or junction of the river near rocks (the modern Páthargháṭá)."[5] I should observe that the *Chora-panchásiká* quoted by Major Francklin is quite a different poem from the *Chorapanchásiká* appended to a Sanskrit work called

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1 Agni Puráṇa, ch. 109, v. 20.
2 See note 3, p. 7. 3 Matsya Puráṇa, ch. 22, v. 8.
4 Francklin's Site of Ancient Palibothra, 1815, p. 55.
5 *Ibid*, appendix xiii.

Vidyásundara, which is a poem of double-entendre of the class of *Rághava-pándaviyam*, and which is reputed, without any reasonable ground, to be the work of Bararuchi.

The word *Silá-Sangama* itself conveys no sense, and therefore Major Francklin was obliged to attach to it two different meanings in two different places. In one place he says it signifies "the union or junction near the rocks, a characteristic which this spot, strewed over with huge and shapeless masses of rock, sufficiently exhibits," which in plain language means the junction of the rocks,—a meaning which is too absurd to commend itself to anybody. He therefore in a subsequent interpretation in another place says, "Silá-sangama, or junction of the river near rocks (the modern Pátharghátá)." or in other words the confluence of the rivers Kosi and the Ganges near Pátharghátá, which confluence, according to his own statement, was then at a distance of five miles to the north of Pátharghátá.[1] Even now the confluence is at a distance of three miles from that place. Consequently the statement that the junction of the rivers was near Pátharghátá can not at all be correct. But he has quite overlooked the true significance or origin of the word *Sangama*. The word *Sangama* is merely a corruption of *Sanghárama* which means a monastery.[2] and the compound word *Silá-Sanghárama* is an abbreviation of *Vikramasilá-Sanghárama*. Lapse of time has brought about this corruption and abbreviation of the term Vikramasilá-Sanghárama. I have already stated that the Vikramasilá-Sanghárama was destroyed at the end of the twelfth century. that is in 1193 A.D. when the Magadha kingdom was conquered by the Mahomedans. and it appears from the colophon of the *Chora-panchásika* quoted by Major Francklin that the work was compiled in Samvat 1445, the words used being "भूतं [5] वेद [4] युगं [4] च चन्द्र [1] सहितं अब्दे"[3] which symbolical figures, according to the well-known rule of transposition, "figures go to the left."[4] become 1445 corresponding to 1388 A.D. I think that

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[1] *Ibid*, p. 55.

[2] See Sir Monier Williams' Buddhism, p. 428. He says, "Then, as Buddhism spread, kings, princes and rich men competed with each other for the privilege of erecting vast monasteries—sometimes called Viháras, sometimes Sanghárámas—to which temples, libraries, and schools were generally attached, and in which dwelt wealthy communities of monks. who were allowed to hold property in land."

[3] श्रीमत्विक्रमधीरराजकुमुद: चन्द्रप्रकाशकृत: ।

भूतं वेदयुगं च चन्द्रसहितं अब्दे गते संख्या ॥

एते अब्दगतेऽपि चौरकविना काव्यं कृतं संग्रह: ।

श्रीमत्पण्डितधीरसत्सुधिकवि: श्रीभट्टपंचानन: ॥

इति चौरपंचासिका—Site of Ancient Pali-bothra, appendix xiii.

[4] अङ्कस्य वामागति: ।

two hundred years (namely, from 1193 to 1388 A.D.) was a long period for transforming the name of a place out of recognition.

It appears, therefore, that the ancient name of Páthargháṭá was Vikramasilá Sangháráma, or in its abbreviated form Silá-Sangama,—the monastery of Vikramasilá. For paucity of information we are not in a position to state whether the place was called Vikramasilá and from it the monastery got the name of Vikramasilá monastery, or the monastery was called Vikramasilá-Sangháráma and the place derived its name from the monastery. Hiuen Tsiang recorded no name of Páthargháṭá in the seventh century.

Vikramasilá monastery, as I have stated before, was a Buddhist monastery situated on a bluff hill on the right bank of the Ganges in the kingdom of Magadha, and had sufficient space within it for a congregation of 8,000 men with many temples and buildings. I have already shown that on the top of the projecting steep hill of Páthargháṭá there are the remains of a Buddhist monastery; the space covered by the ruins is large enough to hold an assembly of many thousands of people; and the Páthargháṭá hill is on the right bank of the Ganges. It may be objected that Páthargháṭá is situated within the limits of ancient Anga and not of Magadha, but it should be borne in mind that the country of Anga was conquered and annexed to Magadha by King Bimbisara in the sixth century B.C., and since then it had formed a part and parcel of the Magadha dominion.[1] I have also shown that Páthargháṭá was a place of great sanctity to the Hindus in the seventh century A.D., and the Vikramasilá-Sangháráma was not founded till the eighth century of the Christian era by Dharma-pála, king of Magadha, and that its name as recorded by Major Francklin was Silá Sangama, an abbreviated and corrupted form of Vikramasilá-Sangháráma. Considering all these circumstances, there can be no reasonable doubt that Páthargháṭá near Colgong in the district of Bhagalpur was the ancient Vikramasilá, and that the ruins upon it are the remains of the celebrated monastery which existed for about four centuries and a half from the middle of the eighth century to the latter end of the twelfth century A.D. Even the name of Silá-Sangama, which was known in 1812 as the ancient name of Páthargháṭá, has now been forgotten, though a complete century has not yet elapsed, and perhaps after a few years hence no trace would remain of this famous seat of learning which was resorted to by students from all parts of India and outside India.

I am quite confident that if the ruins at Páthargháṭá be excavated and explored, they would yet yield a valuable find of archaeological interest which would repay all troubles and expenses, though no doubt some of the finest sculptures have been removed. It is possible also that some inscriptions in stones or copperplate grants may be discovered which would at once settle the identity of the place.

[1] Spence Hardy's Manual of Buddhism, 2nd Ed., p. 166.

NOTE.

At the suggestion of the contributor of this paper I add here a short note. The Svayambhū-purāṇa is stated in the colophon to have been copied in *Saṁvat* 919. This *Saṁvat* evidently refers to the Newari era, and the year 919 corresponds to 1799 A.D., a view which removes most of the difficulties which have been discussed at the early part of the paper. But the learned contributor maintains that the *Saṁvat* refers to Vikrama era, as is evident from his paper as also from his letter of 5th February from which an extract is quoted below. Addressing me he says—"You have marked for omission the latter part of the first page and the first part of the second page with notes thereon, *i.e.*, the portion relating to the date of the Svayambhū-purāṇa. I have quoted the colophon and stated that the book was written or copied in *Saṁvat* 919 corresponding to 862 A.D.; you say that the date is a Newari Saṁvat and not the Vikrama Saṁvat. You may be right, but still it is *a matter of opinion*, as the colophon does not say whether it is a Newari or Vikrama Saṁvat; . . . ."

S. C. Vidyabhusana,
Jt. Philological Secy., A.S.B.

2. Sikim Copper Coins.

By Monmohan Chakravarti, M.A., B.L., M.R.A.S.

I send herewith ten pice of Sikim kingdom. They are interesting, as being the only coins known to have been ever coined in that tract.

Old Currency of Sikim.

Very little is traceable about the old currency of Sikim. In those days no necessity would have been felt for coinage. Houses lay scattered here and there, and the few huts clustering round various monasteries could hardly be called villages. The rents were paid in kind. Trade routes there were none, and the exchanges were so few that barters would have sufficed. In the old book on Sikim laws finally revised by De-si-sangye Gya-tsho (born in 1653 A.D.) fines in gold and silver are no doubt mentioned. For example, dacoits may be fined from 15 to 80 gold *srang* (law No. 6), and murder punished with 10 to 400 gold *srang* (law No. 9); for blood-shed the price varied from one to one-quarter *zho* (law No. 10), and on separation the husband should pay the wife 18 *zho* or more, or the wife to the husband 12 *zho* (law No. 13). These terms denoted, however, no coins, but certain weights, *zho* meaning a drachm and *srang* an ounce.[1]

With the growing influence of Tibetan Lamas, a few Tibetan coins might have circulated among the higher classes in the eighteenth century; while the Gorkhā conquest of the Terāi towards the end of that century and the subsequent colonization of Darjeeling and lower Sikim by Newārs might have brought in a few Nepālese coins. Darjeeling was ceded to British Government in 1835; and in 1841 an allowance of Rs. 3,000 was made to the Rājā as compensation, which was doubled in 1846. This with the close proximity of Darjeeling District brought the Indian rupee and its subdivisions into current use in Sikim.

The Origin of these Coins.

On the north bank of the great Ranjit river, the river that separates Sikim from Darjeeling, had been settled a few Newārs. One of them secured from the Sikim Rāj the lease of the tract bordering on the river. In the seventies and eighties of the last century, the head of these Newārs, Lachhmidās Pradhān, cleared out the jungle and worked out with the help of Nepālese Mangars and Kāmis certain copper mines

[1] *Sikhim Gazetteer*, pp. 49, 50-1, 53.

discovered in his estate, specially Pāche-khāni, Bhoṭang-khāni and Tuk-khāni. A good deal of the copper thus obtained were sold in Nepāl and Darjeeling; but much of the later ores lay dead stock from the comparative cheapness of foreign imported copper. So with the approval of the Sikim Rājā Tho-tub Namgye he had a part converted into pice. Several shroffs were brought from Nepāl on monthly salaries of Rs. 12 to Rs. 20, and the coining was carried on for three successive years, 1940-1942 Saṁvat (1883-1885 A.D). At first the business was profitable; but the Deputy Commissioner of Darjeeling forbade its import into that District, and the circulation fell so rapidly as to compel the stoppage of all coining.[1] Since then the pice have gone out of use entirely, and I had some difficulty in securing the specimens now sent to the Society.

Their description.

These Sikim pice are all round in shape, with a standard weight of 90 grains or half-rupee. The obverse has within a square a Nāgri inscription in three lines, *Srī Srī Srī Sikim-pati Māhārāj*; below the square is the year of coinage (1940, 1941 or 1942), mostly defaced, and on the other three sides of the square a number of dots. The reverse has within a square another inscription in three lines, *Srī Srī Srī Sikim Sarkār*; on each side of the square is a group of seven dots, six round one, all more or less enclosed in a leafy twine. The actual weights vary from 90·5 grs. to 74 grs., a difference up to sixteen grains from the standard weight. This may be partly due to wear and tear, but also to the original shortage when the coins after being stamped with the die were cut off from the copper sheet. The diameters also vary slightly from ·87 inch to ·95 inch.

Judging from the inscriptions, two sets of dies would appear to have been used. The (*a*) set has on the obverse in line 2 *Sikim-pati* and in line 3 *Māhārāj*, and on the reverse in line 3 *Sarkār*; the (*b*) set has on the obverse in line 2 *Sikim-pa* and in line 3 *ti Māhārāj*, and on the reverse generally (except two doubtful) in line 3 *Sakār* (without *r*). Of the ten pice, two belong to (*a*) set, and 8 to (*b*) set, the two doubtful ones of (*b*) having *Sarkār* and not *Sakār*.

These pice are obvious imitations of the later Gorkhā pice, *viz.*, of Surendra Vikrama Sāha Deva (1847-1881).[2] This is quite natural, the proprietor and the engravers being all Nepālese. Two *paisās* of Surendra Vikrama, one of the year 1792 śaka, are also sent for ready comparison. They were obtained from a resident of Sikim.

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[1] Many of the facts in this para have been gathered from Rāi Sāhib Haridās Pradhān, the eldest son of the late Lachhmidās Pradhān.

[2] See the coinage of Nepāl by E. H Walsh, J.R.A.S., 1908, p. 752, pl. vii. fig. 11. For the king Surendra Vikrama and his prime minister, Jaṅg Bāhādur, see the *Imperial Gazetteer*, article "Nepal."

Details of the Copper Coins.

A. Set. Sikim Pice—

1. 88 grs., diam.—·95 inches, year 194* (Saṁvat).
2. 79 ,, ,, —·87 ,, ,, 1941 (?).

B. Set—

3. 90·5 ,, ,, —·95 ,, ,, 1941.
4. 75·5 ,, ,, —·9 ,, ,, 1942.
5. 79 ,, ,, —·9 ,, ,, 1941.
6. 87 ,, ,, —·9 ,, ,, 1942.
7. 84 ,, ,, —·87 ,, ,, *941 (?).
8. 81 ,, ,, —·88 ,, ,, 194*.

Doubtful—

9. 74 ,, ,, —·87 ,, ,, 194*.
10. 82 ,, ,, —·87 ,, obverse nearly defaced, but *mapa* in 2nd line traceable.

Nepāl, Surendra Vikrama Sāha Deva—

1. 77 grs., diam.—·87 inches, year 1792 (śaka).
2. 80 ,, ,, —·9 ,, ,, defaced.

3. Notes on Certain Archæological Remains at Tezpur (Assam).

By Professor Padmanatha Bhattacharyya Vidyāvinoda, M.A.

In January 1907 I had an occasion to pay a visit to Tezpur. "Tezpur" is an Assamese paraphrase of "Śoṇitapur" of the legendary fame, 'Śoṇita' in Sanskrit meaning also "blood" which is "Tez" in Assamese. I do not think, however, that the capital of so mighty a prince as Váṇa bore such an inauspicious name as "blood-city"; and I am rather inclined to believe that 'Soṇita' as an adjective here means "red," so that its meaning is "red-city" instead of what is signified by the Assamese version.[1]

The remains of a long destroyed stone building are still seen just close to the Deputy Commissioner's Office on the Brahmaputra. This building, according to the tradition, was the fort of Váṇa. Whatever it might have been, only some blocks and columns and a few fragments of the cornice are now seen there. On one or two stone blocks I noticed numerical figures in Devanágara imprinted. Even now we find chalk or ink marks on wooden planks and iron bars, in the mother language of the artisan when such materials are to be fitted into some structure. This small fact shows that in that very remote period of antiquity, when this stone building was constructed, the language of the people was Sanskritic[2] if not

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[1] Śrijut Hem Chandra Gosáin, Extra Assistant Commissioner at Tezpur—an authority on the Assamese antiquities—has kindly given me the following information on this point :—

> "The town was called and known as 'Soṇitapur' till the British occupation of the country. A certain Deputy Commissioner changed it into 'Tezpur' to make it pure Assamese, it is said!!"

As to the name 'Soṇitapur' the same authority writes :—

> "According to local traditions a large number of people were killed in the battle that was fought between Váṇa and Srikrishṇa, so much so that the waters of the Brahmaputra became quite red with blood."

This popular interpretation falls to the ground when we remember that the city had had no other name in the Puráṇas while spoken of even before that bloody battle was fought. It is the nature of the common people often to misinterpret a name and then invent what is called a folk-tale to support it.

[2] It might be also noted that the rock inscription in the river bed just below Tezpur is in a character which, although not Devānāgri, is evidently closely allied to it. The late Professor Kielhorn partly

Sanskrit; besides throwing a sidelight on the method of architecture or the skill of the masons in those far-away days of antiquity.

One column[1] of the long destroyed building, which stands close to the Court, is particularly noticeable: on a broad side of this are carved the figures of some of the earlier avatárs of Vishṇu, and in the margin there are carved figures of animals. I was struck with the symmetry in these figures; and the sculptor has shown a bit of his wit in representing his carved deer as scratching its nose with the hoof of one of its hind legs. Centuries have rolled away from the date when the building was constructed, and Time has worked its havoc; but we feel grateful to the Dispenser of All that some specimens of workmanship of so old a time are still spared to us. But the manner in which the columns and blocks of stones have been kept is highly objectionable: they have been left quite exposed to the destructive elements in Nature—sunshine, wind and rains. Already the carvings on the column referred to have become disfigured, and a few years after the figures will be rendered perfectly indistinct.

A question arises, "Is this the place really where Váṇa of the legendary fame had his capital?" We are told that there is a locality in Northern Bengal where there is "Váṇa rájár gad"—fortifications of King Váṇa—still pointed out. But this difficulty may easily be surmounted by a supposition that the mighty ruler of Soṇitapur might have extended his territory up to that locality.

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deciphered this inscription, obtaining, I believe, the name of the king and the date.—[Lt.-Col. P. R. Gurdon, Honorary Director of Ethnography, Assam.]

[1] *Vide* Photograph.

Remains of a Pillar at Tezpur.

4. Studies in the Experimental Breeding of Indian Cottons: an Introductory Note. Part 2—On Buds and Branching.

By H. Martin Leake, M.A.

1. *Buds.*—In all the Indian species of Gossypium the plant consists primarily of a monopodium, that is, the main axis, formed by the development of the plumule, is a monopodium which continues to grow indefinitely. On this central stem leaves are borne alternately, and each leaf bears in its axil a main, and an accessory, bud. This latter occupies a lateral position with respect to the main bud. Similarly, in the axils of all leaves, whether situated on the secondary, tertiary or more remote branches, two buds occur of which one is a main bud and the other accessory, and occupying this relative position with regard to the other.

It is clear that there are two possible positions which the accessory bud may occupy and at the same time fulfil the above condition. If the branch is held with the leaf in the proximal position the accessory bud will appear, in the one case, to the right of, and in the other, to the left of, the main bud. A large series of plants have been subjected to a close examination at a time when the main shoot was approximately two feet in length, and the number of leaves, consequently, numerous. The plants included among their number the offspring, by artificial self-fertilization, of pure stocks, crosses in the F_2 generation and crosses of the F_1 generation by the parents. With rare exceptions [1] it has been found that, for a particular plant, the position of the accessory buds situated on the main stem is constant, *i.e.*, they lie always to the right of, or always to the left of, the main bud.

This question of the position of the accessory bud has been studied in detail for the first time during the past season, and the records for two generations are now obtainable. It is evident, however, that it is a character which does not follow those laws of inheritance which have been found to hold good

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[1] A few cases have been noted in which in a single leaf axil, and still more rarely in two to four (one case only) leaf axils, of one main shoot the position of the accessory bud is reversed. It is difficult to state positively that such cases are not true exceptions, but it must occasionally happen that a main bud will be damaged and checked in growth, in which case the accessory bud will take its place. It will be well, therefore, to bear in mind that such exceptions may be apparent only.

in numerous cases of pairs of characters. The two characters are mutually exclusive in that no cases have been observed in which the main bud separates two accessory buds.

In the past season, of the plants examined with regard

TABLE I.

No. of cases.	No. of plants from one parent.	Generation. T = pure type P = parent	Accessory buds on		No. of cases where offspring are similar.
			Right.	Left.	
1	110	F_2	56	54	..
1	105	F_2	62	43	..
1	31	F_2	13	13	..
1	24	F_2	12	12	..
1	20	T	9	11	..
1	20	F_2	11	9	..
1	19	T	9	10	..
1	18	T	11	7	..
1	17	T	4	13	..
1	15	T	10	5	..
3	14	T	19	23	..
1	14	F_2	7	7	..
1	13	F_2	7	6	..
3	12	T	18	18	..
2	12	F_2	10	14	..
1	12	$P \times F_1$	4	8	..
1	11	F_2	8	3	..
5	10	T	22	28	..
1	10	F_2	4	6	..
1	10	$P \times F_1$	6	4	..
3	9	T	11	16	..
1	9	F_2	6	3	..
4	8	T	10	22	..
1	8	$F_1 \times P$	6	2	..
2	7	T	7	7	..
2	7	F	5	9	..
1	7	$P \times F_1$	3	4	..
5	6	T	14	16	..
1	6	$F_1 \times P$	3	3	..
1	6	$P \times F_1$	3	3	..
3	6	F_2	11	7	..
3	5	T	3	12	..
1	5	F_2	3	2	..
9	4	T	18	18	1
1	4	F_2	1	3	..
2	4	$F_1 \times P$	5	3	..
1	4	$P \times F_1$	3	1	..
2	3	T	4	2	1
2	3	F_2	4	2	..
6	2	T	5	7	1
3	2	F_2	5	1	2
		Total ..	432	442	5

to this pair of characters, the proportion exhibiting each character is approximately equal. In no case, as Table I indicates, where more than four plants have been raised from a single parent, have the offspring uniformly exhibited the same character. Now supposing the inheritance to follow the normal course between this pair of opposed characters—in which case one would be dominant and the other recessive—the only conclusion to be drawn from the facts indicated by this table is that the crop of the present year is derived exclusively from impure dominant forms. Not only have the parents been taken at random, but the proportion in the offspring differs widely from the expectation of 1-3, and such a supposition is, therefore, inadmissible in the face of the somewhat extensive series of observations. It would appear, then, that the position of the accessory bud is dependent on some factor called into play after fertilization has taken place and during the subsequent development of the embryo.

The constancy of the position of the accessory bud is, thus, definite for the main stem. In numerous cases, however, the apical bud of the main stem is destroyed early in the growth of the plant, and development is continued by the growth of branches from the main axillary buds situated below the point of injury—two, three, or more equally developed branches taking the place of the main stem. Such branches have been found to agree with the main stem in that the position of the axillary buds is uniformly either to the right of, or to the left of, the main bud; but while on one such branch the accessory buds may lie to the right, on a second branch of the same plant they may lie to the left. Table II indicates the number of cases in which the two or more branches of a single plant have been observed to agree or differ in this respect.

TABLE II.

Generation.	Position of accessory bud.	
	Similar.	Different.
Parent	4	3
F_2	18	68
$F_1 \times P$ }	9	14
$P \times F_1$ }		
Total ..	31	85

2. *Branching.*—As has already been noted above, the main shoot of the cotton plant is a monopodium. From this

secondary branches are produced by the development of main and accessory buds which have been shown to exist. The secondary branching may, however, be either monopodial or sympodial, and the various species of Indian cottons now under observation and experimental cultivation exhibit considerable variety in the manner of occurrence of the two types. The two extremes are very marked; in the first of these the main axillary bud gives rise to a monopodium, while in the second, with the possible exception of a few lower branches, this bud gives rise to a sympodium.[1] In this latter case the secondary branches are composed of sections formed by the development of the main axillary bud, and the accessory bud occupies the leaf axil. Such a branch, therefore, appears at first sight to be a monopodium with a single axillary bud, but can at once be distinguished by the scar formed by the withered terminal bud and the slight angle at which the segments lie with respect to each other.

The accessory bud may develop as well as the main bud, and, when this occurs, the accessory branch usually differs from the main branch in this character. Thus, when the main axillary bud gives rise to a monopodium, the accessory bud will form a sympodium, or, if the main branch is a sympodium, the accessory branch will be a monopodium.

The structure of the tertiary branches has not been followed in sufficient detail to justify any definite conclusions, but when they occur, they commonly differ from the branches from which they arise—in other words, the main axillary branch of a secondary branch will give rise to a sympodium if this latter is a monopodium; while, in the case of a sympodium, the secondary bud (which alone remains) will give rise to a monopodium.

On crossing a monopodial by a sympodial type, the offspring differ very slightly from the sympodial parent, though the number of monopodial secondary branches may be somewhat increased. In the next, (F_2), generation, from self-fertilized parents, a series of forms is obtained in which the full sympodial type is dominant but in which, also, every proportion of sympodial and monopodial branches occurring on a single stem is found. The change from the monopodial to the sympodial type of secondary branch, when both occur on the same stem as developments of the main axillary buds, is abrupt, the monopodial forming the basal, and the sympodial the apical group.

The flowers are not concentrated into any well-defined inflorescence, but are developed on the sympodial branches from the terminal bud, and, therefore, appear to lie opposite the leaf. In types in which the secondary branches are sympodia, these branches will themselves bear flowers. In types, however, in

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[1] These two types will, for brevity, be referred to as monopodial and sympodial types respectively.

which the secondary branches are monopodia, the appearance of flowers is delayed until secondary branches are developed from the accessory buds on the main stem or until tertiary branches arise. The development of both these in an uninjured plant is, usually, somewhat later than that of the secondary branches from the main axillary bud, and consequently it is generally found that in monopodial types, *e.g.*, Nurma (*G. arboreum*, Linn.), Broach (*G. herbaceum*, Linn.), the vegetative period, before the flowers begin to appear, is considerably longer than in the sympodial types, *e.g.*, Bengals (*G. neglectum*, Tod.). This lengthening of the vegetative period is illustrated in Table III.

TABLE III.

Type.	Days from sowing to appearance of first flower.	
	1907.	1908.
Nurma, G. arboreum	146	210
Broach, G. herbaceum ..	149	199
Bengals, G. neglectum ..	92	117
Sympodial type with red flower and foliage [1]	..	95

In a manner very similar to that in which the branching character behaves when parents exhibiting the extreme types are crossed, from a cross between a late and an early flowering kind, is obtained a series in which every stage from early to late flowering occurs. If a comparison be made between the type of branching and the number of days to flowering—for which purpose the plants are conveniently arranged in order according to the length of this period—it will be found that the monopodial forms tend to group themselves at one end of the series and the sympodial forms at the other. Accuracy of expression is difficult to obtain in this matter owing to the impossibility of expressing, except in the most general terms, the proportion which exists between the number of monopodial and sympodial branches on a particular plant. Table IV is, however, an attempt to arrive at such an expression. The plants, in both cases belonging to the F_2 generation, are arranged in four groups—(1) monopodial type, (2) approximately three-quarters of the secondary branches monopodial, (3) approximately one-half of these branches monopodial, (4) sympodial type; and values are given to these groups which represent as nearly as possible

[1] Differing from true Nurma in branching and quality of lint.

TABLE IV.

Intervals. No. of days from sowing to flowering.	A. No. of plants.	A. No. indicative of type of branching.	B. No. of plants.	B. No. indicative of type of branching.
Above 170 ..	2	75	..	..
166 — 170 ..	3	91	2	87
161 — 165 ..	4	87	3	75
156 — 160 ..	13	79	5[1]	40
151 — 155 ..	16	62	8	69
146 — 150 ..	13	57	9	50
141 — 145 ..	14	54	9	44
136 — 140 ..	19	64	22	30
131 — 135 ..	25	42	33	21
126 — 130 ..	89	29	21	15
121 — 125 ..	37	26	31	2
116 — 120 ..	43	11	36	1
111 — 115 ..	46	5	26	0
106 — 110 ..	14	4	10	0
101 — 105 ..	3	0	3	0
below 101 ..	1	0	..	..

the extent to which monopodial branches occur. In the table in which the plants have been arranged according to the number of days to flowering, which period is divided into five days' intervals, the number of plants of each of the above groups occurring in each interval is noted. The relative values assigned to each of the four groups are 100 (monopodial type), 75, 50, and 0 (sympodial type). The value for each interval is now obtained by dividing by the number of plants in that interval the total found by adding the numbers obtained by substituting for each plant the number assigned to the set to which it belongs. It is clear, if 100 is obtained as the interval number, it indicates that *all* plants occurring in that interval are of the monopodial type, and, similarly if 0 is obtained, that they are *all* sympodial. Intermediate numbers will indicate roughly the degree to which the plants of that interval approximate to the two extreme types. The two examples given in the table clearly show a considerable dependence of the flowering character upon the type of secondary branching.

3. *Classification.*—The method of branching appears to form a very distinctive characteristic and to be of sufficient

[1] Of these five plants two are of the sympodial type. One of these was dwarfed, and the date of appearance of first flower consequently very late. The second produced flower at the extremities of the sympodial branches only. On account of these two plants, which appear somewhat abnormal, the figure for this interval is abnormally low

importance to form the basis of a primary division of at least that group of cottons which includes the Indian forms and which are capable of being cross-bred, and with this possibility in view observation on the branching habit is being extended to other types. The method, however, involves a considerable departure from the common practice, for it is clear that, with such a character considered to be of primary importance, the value of a herbarium specimen which does not bear a record of the exact position on the plant, becomes of relatively small importance. For example, a tertiary branch of a monopodial type may be indistinguishable from a secondary branch of a sympodial type, and also from the branch developed from the accessory bud of the main stem of a monopodial type. While such a character would require, before adoption as a basis for classification, a close study of a wider series of forms than has been examined up to the present, there are not wanting indications that such a classification is a natural one. These cannot be taken in detail here: it will be sufficient to refer to the greater difficulty which appears to exist in raising the plants of successive generations of a cross if the original plants differ, instead of agree, as to the type of secondary branching. The cross between *Broach* (G. herbaceum, Linn.), and *Bani* (G. indicum, Lamk.) types has yielded in the F_2 generation several plants which are apparently quite infertile. No such difficulty has occurred in such crosses as Nurma (G. arboreum, Linn.) × Broach (G. herbaceum, Linn.), and *Bani* (G. indicum, Lamk.) × *Bengals* (G. neglectum, Tod.).[1]

4. *Economic importance.*—The manner in which the date of flowering depends on the type of branching has already been referred to, and it is a point of considerable economic importance when the question of isolating a type suitable for cultivation in North-West India is under consideration. The climatic conditions are such that only early flowering kinds can produce sufficient cotton to render their cultivation remunerative. The late flowering kinds fruit too late in the season to yield any bulk of lint, and, moreover, the quality of such lint is inferior. Sympodial types are consequently more suited for the plains of Northern India.

Sympodial branches are, however, usually pendent, especially in the later stages, when the weight of fruit is consider-

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[1] Owing to the doubt here thrown on the classifications hitherto adopted, specific names have, as far as possible, been omitted. Where they have been used they bear the same interpretation as in Pt. 1 of this note—Journ. As. Soc. Bengal (new series), iv (1908), p. 13. Considerable confusion already exists with regard to the terminology, and, in the light of the above doubt, it has been considered advisable, for clearness sake, to retain for the time being the names previously used rather than adopt those employed in the important work recently published by Sir George Watt, but which fall under the same doubt.

able, and a type in which all the secondary branches are sympodia is, therefore, objectionable, since in such cases the lowest branches will lie on the ground, and the cotton, when the bolls open, will become stained and dirty. On the other hand the monopodial branches are usually ascending, and the most suitable type will be one in which the lower branches only are monopodia but the upper and more numerous branches are sympodia. Such types already exist, but their lint is very poor. The isolation of such a type requires a full comprehension of the behaviour of the characters when the types are crossbred, and this behaviour will, therefore, be worked out in some detail.

JANUARY, 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 6th January, 1909, at 9-15 P.M.

The Hon. Mr. Justice Asutosh Mukhopadhyaya, M.A., D.L., President, in the chair.

The following members were present :—

Dr. N. Annandale, Mr. I. H. Burkill, Babu Monmohan Chakravarti, Mr. B. L. Chaudhuri, Hon. Mr. Justice H. Holmwood, Dr. Girindra Nath Mukerjee, Pandit Yogesa Chandra Sastri, Sankhyaratna Vedantatirtha, Dr. Satish Chandra Vidyabhusana, Rev. A. W. Young.

Visitors :—Babu Jaganmohan Chakravarti, Mrs. B. Egoroff, Miss S. Egoroff.

The minutes of the last meeting were read and confirmed.

Thirty-five presentations were announced.

The President announced :—

1. That Lieut.-Col. Sir A. H. McMahon and the Hon. Mr. Justice Sarada Charan Mitra have expressed a wish to withdraw from the Society.

2. That the following three gentlemen have not paid their entrance fees; their elections therefore have, under Rule 9, become null and void.

Dr. Harinath Ghosh.
Lieut. Walter Meade, Indian Army.
Captain F. A. F. Barnardo, I.M.S.

3. That he has received no essays in competition for the Elliott Prize for Scientific Research for the year 1908.

The following thirteen gentlemen were ballotted for as Ordinary Members :

The Hon. Mr. Justice Syed Sharfuddin, 18, Royd Street. proposed by Babu Monmohan Chakravarti, seconded by Mr. G. H. Tipper; *Mr. S. H. Butler, C.I.E., I.C.S.*, Secretary, Government of India, Foreign Department, proposed by Sir Thomas Holland, K.C.I.E., seconded by Dr. E. D. Ross: *Mr. William Robert Gourlay, I.C.S.*, Director of Agriculture, Bengal, proposed by Dr. N Annandale, seconded by Mr. G. H. Tipper: *Mr. C. Somers Taylor, B.Sc.*, Agricultural Chemist, Bengal, proposed by Mr. D. Hooper, seconded by Mr. G. H. Tipper; *Dr. A. Martin Leake, F.R.C.S., V.C.*, proposed by Lieut.-Col. G. F.

A. Harris, I.M.S., seconded by Major L. Rogers, I.M.S.; *The Hon. Mr. Charles Evelyn Arbuthnot William Oldham, I.C.S.*, Financial Secretary, Government of Bengal, proposed by the Hon. Mr. Justice H. Holmwood, seconded by Sir Thomas Holland, K.C.I.E.; *Mr. A. G. Shirreff*, Assistant Magistrate, Azamgarh, U.P., proposed by Mr. E. P. Harrison, seconded by Mr. C. W. Peake; *Mr. K. Maitra*, Assistant Settlement Officer, Faridpur, proposed by Mr. J. C. Jack, seconded by Mr. H. E. Stapleton; *Babu Nirmal Sankar Sen, M.A.*, proposed by Mr. B. L. Chaudhuri, seconded by Dr. N. Annandale; *Gilbert T. Walker, D.Sc., F.R.S.*, Director-General of Observatories, proposed by Prof. J. A. Cunningham, seconded by the Hon. Mr. Justice Asutosh Mukhopadhyaya; *Babu Goganendranath Tagore*, Zeminder, proposed by Mr. B. L. Chaudhuri, seconded by Dr. N. Annandale; *Babu Kshitindra Nath Tagore, Tattvanidhi, B.A.*, proposed by Mr. B. L. Chaudhuri, seconded by Dr. N. Annandale; *Mr. G. L. Mukherji*, Merchant and Landholder, proposed by Mr. D. Hooper, seconded by Mr. I. H. Burkill.

Dr. N. Annandale exhibited a specimen of *Torpedo*, apparently identical with the European *T. marmorata*, taken by Dr. Travis Jenkins at Puri on the Orissa Coast. Dr. Annandale also exhibited the head of an *Aetobatis* apparently distinct from *Aetobatis narinari*, the only species recognized by most recent ichthyologists; the new form differing from the common one in the length and narrowness of its snout as well as in other characters.

Dr. N. Annandale on behalf of Mr. G. H. Tipper exhibited a life series of a species of Cymbium.

The following papers were read :—

1. *The Etymology of Ranchi.* *By* Maulavi Abdul Wali.

This paper has been published in the *Journal* for December, 1908.

2. *The Date of the Salimi Coins.* *By* Geo. P. Taylor. *Communicated by* Mr. H. N. Wright.

This paper has been published in the *Journal* for November, 1908.

3. *Certain disputed or doubtful Events in the History of Bengal. Early Musalman Period, Part II.* *By* Monmohan Chakravarti.

4. *Kathi. The "soul departure" feast as practised by the Tangkhul Nagas, Manipur, Assam.* *By* Rev. W. Pettigrew. *Communicated by* Dr. Annandale.

These two papers will be published in a subsequent number of the *Journal*.

5. *Notes on certain Archæological remains at Tezpur, Assam.* *By* PADMANATH BHATTYACHERJI, M.A. *Communicated by the President.*

6. *Nyayasara by Bha-Sarvajna.* *By* MAHAMAHOPADHYAYA SATIS CHANDRA VIDYABHUSANA, M.A., PH.D.

7. *Inscription of Gayada tunga deva.* *By* NILMANI CHAKRAVARTI, M.A. *Communicated by* MAHAMAHOPADHYAYA HARAPRASAD SASTRI.

These two papers will be published in a subsequent number of the *Journal*.

8. *A short notice on Mir Abu Turab Vali.* *By* DR. E. D. ROSS.

The President announced the death of Dr. Pischell, Professor in the University of Berlin and Dean of its Philosophical Faculty. It was agreed to send a letter of condolence to the University of Berlin.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's Rooms on Wednesday, the 13th January, 1909, at 9-15 P.M.

LIEUT-COLONEL G. F. A. HARRIS, I.M.S., in the chair.

The following members were present :—

Dr. A. S. Allan, Dr. Adrian Caddy, Dr. Gopal Chandra Chatterjee, Captain F. P. Connor, I.M.S.; Dr. H. M. Crake, Captain F. B. Foster, I.M.S.; Dr. E. A. Houseman, Dr. Girindranath Mukhopadhyaya, Major J. Mulvany, I.M.S.; Captain J. G. P. Murray, I.M.S.; Dr. T. F. Pearse, Lieut.-Col. H. W. Pilgrim, I.M.S.; Captain H. B. Steen, I.M.S.; Major L. Rogers, I.M.S., Honorary Secretary.

Visitor :—Dr. Harachand Das.

The minutes of the last meeting were read and confirmed.

Clinical cases were shown by Lieut.-Colonel Harris, I.M.S.

The discussion on Tuberculosis in Bengal was continued papers being read by Lieut.-Colonel H. W. Pilgrim and Major J. Mulvany. The discussion was adjourned.

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List of Officers and Members of Council

OF THE

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The Hon. Mr. Justice H. Holmwood, I.C.S.

5. Tamarisk Manna.

By David Hooper.

The sweet exudation of the Tamarisk shrub has been known from very early times. Herodotus, writing[1] of the travels of Xerxes, speaks of the city of Callatebos wherein dwell "confectioners who compose sweetmeats of tamarisk honey and wheat." Commentators on Herodotus have differed in their opinion about the honey mentioned in the Greek text, some referring it to a natural sugar collected from the bushes, while others regarded it as an artificial preparation. Sir W. Ouseley,[2] however, states that Herodotus describes very exactly the sweetmeat so much in use among the Persians; it was composed of wheat-flour kneaded into a thick paste with *gazangabin*, a kind of honey or manna (*angabin*) found on the *gaz* or tamarisk tree. This sweetmeat was placed before the guests at almost every entertainment in which Ouseley participated in his travels through Persia.

In 1813 Captain B. Frederick recorded[3] some interesting remarks on the substance called *gez* or manna found in Persia and Armenia. He described the sweetmeat *gezanjabin* used throughout Persia as flat round cakes composed of the white gummy *gez* mixed with rosewater, flour and pistachio nuts. It had the appearance and feel of dough though it was adhesive, hard and brittle. Captain Frederick observed the collection of the manna near Khonsar. The shrub on which the *gez* was found was called *gavan*: it grew from a small root to the height of about two and a half feet, spreading into a circular form at the top from three to four feet in circumference. The leaves were small and narrow, and underneath the *gez* was seen, spread all over the tender branches like white uneven threads, innumerable little insects creeping about. The insects were either three distinct species, or one in three stages of existence. One was diminutive and red, the second dark and like a common louse, and the third like a small fly. The peasants were of opinion that this substance was the production of these minute creatures, as no gummy liquid was found oozing from the fissures in the bark. The collection was made every third day during September. The collectors were furnished with a thick stick curved at the

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[1] *Herod.*, lib. vii, cap. 31.
[2] *Travels* (1811), i, 381.
[3] *Transactions of the Literary Society of Bombay*, September 28, 1813.

extremity which was covered with leather, an oval leather bowl three feet long and two feet broad, and a sieve to free the manna from insects and leaves. The leather receptacle was placed beneath the bushes, and the bushes above beaten with the crooked stick. In a few minutes a handful of white sticky substance, not unlike hoarfrost, was obtained. This was sweet to the taste and sticking to the fingers if pressed. It remained hard in cool weather, but liquified when exposed to a higher temperature.

In a note[1] on the above paper by Mir Jaifer Tabeat, a Persian physician, we are informed that *gez* is the name of a tree called in Arabic *turfa*. There are two kinds; one a shrub yielding manna *gezangabin*, the other is a tree yielding a similar substance, called in Arabic *athel*. which is astringent and employed in medicine; *Taranjabin* is a third kind used as a laxative. He states that it is the universal opinion in Persia that these exudations are not the work of insects.

According to researches made upon the spot by Ehrenberg and Hemprich[2] the *gavan* of Persia is *Tamarix gallica* var. *mannifera*, Ehrenb., and the aphis, which feeds upon it and produces the *gez*, is the *Coccus manniparus* of Ehrenberg. As recent writers speak of the tamarisk manna as an exudation or secretion of the plant, the question of its production by insect agency must be left for further investigation. Since there are several kinds of manna it is possible that some are produced by insects, and others, as the ash manna of Sicily, occur as saccharine exudations.

Tamarisk manna is produced in the valleys of the peninsula of Sinai, especially in Wady-el-Sheikh This is collected in August by the Arabs, and sold to the monks of St. Catherine, where it is stored as a yellow granular syrup in large earthen vessels. To pilgrims visiting the monastery it is sold in small tin vessels as "Manna Israelitarum" or "Manna tamariscina" It is used by the Bedouin Arabs with their food, and is eaten in Palestine as a delicacy.

Among other references to tamarisk manna Rich[3] might be quoted. He describes the collection of *gazangabin*, called by the Koords *ghehzo*, by picking the leaves of the trees, letting them dry and then gently threshing them over a cloth. The season he says commences about the end of June. At Jacobabad,[4] a station known for its high summer temperature, the tamarisk yields in the cold weather a very course kind of manna which is picked in the early morning before the sun rises and eaten by the very poor.

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[1] *Asiatic Journal*, vii (1819), 268.
[2] *Symbolæ Physic, etc., Zoologica, ii, Insecta* x.
[3] *Residence in Koordistan*, 1, 142.
[4] *Trans. Med. and Phys. Society, Bombay*, iv, 1860, 329.

In Persian works manna is described as a dew which falls upon the tamarisk as well as other trees, and becomes solidified. For instance, in the MS. of Nuzhat al Culub quoted by Ouseley, the manna of the tamarisk is described as a dewy substance that settles on the leaves of the *gaz*, and becomes *gazangabin*. "This," adds the MS., "chiefly abounds in Kurdistan. When the manna falls on the *balut* or oak tree, it contributes to the sweet compound called *dustab*; about Hamadan it settles on the *bid* or willow; in the territory of Khawar it falls on the thorn, *khar*, and is thence called *kharangabin*; some also in the autumn is found on the "surface of the sand." The last-named source will be described later, but it is evident from the above observations, added to the experience of more recent writers, that the tamarisk is not the only shrub that yields commercial manna. The name *gazangabin* is loosely applied by the Persians to the manna obtained from other plants. Dr. J. E. T. Aitchison describes three plants in addition to the tamarisk which yield manna in Persia. The first is *Cotoneaster nummularia*, Fisch. et Mey, the *siah-chob* (black stick), which yields *shirkhist*, meaning "hardened milk." It is met throughout the Paropamisus range and in Khorasan, at an altitude of about 5,000 feet. The second kind is yielded by the camel-thorn *Alhagi Camelorum*, Fisch. The plant is called camel-thorn (*shutar-khār*) or goat's thorn (*khar-i-buzi*), and the manna is called *taranjabin*, which means the "honey from the green bush." The country round Rui-khanj in Persia is celebrated for this product, whence it is exported in all directions. The third kind was obtained from the foliage of *Salsola foetida*, Del. Haussknecht[1] states that *gazangabin* designates a manna collected in the mountainous districts of Chahar-Mahal and Faraidan from two species of *Astragalus*.

For the purposes of this paper it will be sufficient to enumerate the manna-yielding species of tamarisk and confine our remarks to the sweet substance produced by them. *Tamarix gallica*, Linn., the most common species, is a cosmopolitan plant, found all over India and Ceylon and in Southern Asia, and distributed to the western and southern shores of Europe and northern and tropical Africa. It delights in tracts where the ground is covered with salt, hence the name *shora-gaz* or *gaz-shora*, given to the plant on account of the shora or salt found in the soil where it grows. In Dr. Sven Hedin's book "Through Asia," the tamarisk is referred to as the plant which encroaches furthest into the awful desert region traversed by men. In certain seasons in the year the leaves and branches of these bushes are the only green fodder of the camel. The manna is not produced on the shrubs in

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[1] *Archiv der Pharmazie*, 192 (1870), 246.

India, but as we have seen, occurs on these shrubs in Arabia, Persia, Baluchistan, Afghanistan and Central Asia.

The older references to the species of tamarisk that yield a saccharine deposit are doubtless in need of revision, but more recent explorations by botanists and travellers have enabled us to more exactly determine the plants. Dr. J. E. T. Aitchison[1] has described specimens from West Afghanistan, and Mr. R. Hughes Buller, C.I.E.,[2] in preparing the Gazetteer of Baluchistan, has done much in collaboration with the Reporter on Economic Products in collecting useful plants and obtaining their identifications. The following species are known to afford manna.

Tamarix gallica, Linn., var. *mannifera*, Ehrenb.,—*Gavan*; is found in Khonsar, south-west of Ispahan, in Persia, and in the range of mountains through Kurdistan dividing Persia from Asia Minor and Mesopotamia where the sugar is called manna by the Armenians, and said to be exported in quantities through Erzeroum to Constantinople (Capt. Frederick). Dr. Aitchison says of this plant growing in the Badghis: "This was pointed out to me by a native of Kerman in Persia as being the tamarisk that yielded manna in that district; and there called *gaz-shakar*. The manna is called *shakar*, *gaz-angabin* or *gaz-anjabin*, and is said only to be collected in south-eastern Persia, where it is obtained in large quantities and exported in all directions."

T. articulata, Vahl. This forms an apparently indigenous forest on the Helmand river, Afghanistan In Baluchistan it is found in Sibi, Nauchi and Pazha valley in the old Thal-Chotiali district, now Loralai and Sibi, Kotiro in the Levy tracts, Las Bela State, Hab river, Pahrod river, Kharan. It is called *khora-gaz* in Afghanistan, and *kirri*, *shakar-gaz*, *gagaz* and *siah-gaz* in Baluchistan. It affords a sweet gum or sugar.

T. macrocarpa, Bunge. The red Tamarisk. A common shrub sometimes occurring as a good-sized tree, with the young bark very red. This occurs in the plains throughout northern Baluchistan, in many places forming thickets. It is called *kirri* and *gaz-surkh*. This bush, and *T. tetragyna*, Ehrenb., are said to yield a saline (?) incrustation which has not been examined.

T. Pallasii, Desv. A glaucescent species found in the following places in Baluchistan: Khazza post, Rakh-Torkhel, between Lijji Karez and Chagai, Sibi, Pahrod river, Kharan. This plant occurs in western Tibet up to 12,000 feet. It is called *shingar-gaz*, and is said to produce a sweet gum inferior to *shiah-gaz* (*T. articulata*).

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[1] *Botany of the Afghan Delimitation Commission.*

[2] *A Working List of the Flowering Plants of Baluchistan*, by I. H. Burkill, 1909.

In connection with this plant and its manna a very interesting account of its occurrence was brought to light in 1905. The Director of the Geological Survey of India, Sir Thomas Holland, forwarded to the Reporter on Economic Products samples of earth sugar collected in Seistan by a member of Col. (now Sir Henry) McMahon's Mission, and the samples were accompanied by notes written by Mr. T. R. J. Ward describing the mode of its occurrence. The substance was called *shira* or sugar found in the cracks in the dried ground of a region liable to inundation. The note proceeds. "On the 17th May 1905, when Zillahdar Amir Singh was crossing the dry bed of the inundated area near Chah Muhammad Reza, the Baluchis showed him a sticky, saccharine, treacle-like substance in the cracks of the ground. This ground had been under several feet of water in the summer of 1903, but it became dry at the end of 1903 or beginning of 1904. The people called this sticky viscous substance *shira-i-zamin* (sugar of the soil), and they said it was found on lands which had been flooded by the Hamin. After the water had disappeared, and the land had dried up, the *shira* appeared. The *shira* from the flood of 1903 appeared in many places in May 1905. The flockowners, who graze their flocks on the scrub and reeds that grow near these wells, collect the *shira* and eat it."

The occurrence of sugar in the sandy soil is easily explained by the presence of tamarisk bushes growing on the banks around the *gauds* or saline swamps in Seistan and its neighbourhood. The manna shed by the bushes falls to the ground and becomes liquified by heat or dissolves in the water during inundation, and as the soil dries the sugar forms in sandy lumps on the surface. The sandy impurities rendered it difficult to examine the sugar with any exactitude, but it was found to consist largely of a reducing sugar without any crystalline properties: a portion of it was converted into a sweet, ropy gum, probably owing to atmospheric exposure.

From Mr. Ward's note we gather the following further information about the subject. There are two kinds of tamarisk growing near Seistan, named *shora gaz* and *lees-gaz*. *Shora gaz* is so called because it is weak and brittle, and its branches either large or small can be broken by the hand without any great effort. *Lees-gaz*, on the contrary, is stronger and harder, and its branches are not easily broken. A flowering specimen of the former was received in 1906 from Captain A. D. Macpherson, H. B. M's Consul for Seistan and Kain, and was identified by Mr. Burkill as *Tamarix Pallasii*. This is the principal shrub growing in the bed of the Gaud-i-Zireh, a saline marsh situated in the north-western corner of Baluchistan. In 1877, after the spring floods, some water reached this tract and filled up the deeper portion of the bed down to Ziarat-i-Pir Kisri. Three years afterwards the tamarisk grew to its full height in the areas

from which the brackish water had receded. Late in the spring the *shora-gaz* of the Gaud-i-Zireh yields in very large quantities a kind of sugar which the Baluchis call *tirmi*. This occurs on the branches in round lumps as large as walnuts or smaller. The flock owners (*Maldar*) collect a quantity of it, and a large number of men from Bandar i-Kamal Khan and Rudbar also visit the district for the purpose.

The collection of *tirmi* is made as follows : The branches of the tamarisk are cut off and dried. When dry they are beaten with wooden mallets until the sugar is separated. Tirmi is a very hard substance. and the beating does not reduce it to powder, but to small pieces about the size of split peas. In the proper season an ordinary man could collect daily 48 pounds of tirmi. The price of one Seistani man ($6\frac{1}{2}$lb) is 3 to 4 krans (Re 1 -). The collection is, therefore, a profitable industry.

Tamarisk manna or gazangabin is imported into Bombay from Persia. The value is about eight annas per pound. It is kept in most druggists' shops in northern India. The Hakims, it being a Muhammadan drug, consider the manna to be detergent. aperient and expectorant.

The chemical composition of this substance is of some interest. Samples of manna from Sinai and Kurdistan were examined by Berthelot [1] in 1861. They were thick syrupy or pasty masses of a yellowish colour, and contained from 55 to 61 per cent. of cane sugar. 16·5 to 25 per cent. of inverted sugar (levulose and glucose), and 20 to 22·5 per cent. of dextrine and impurities. A sample of Persian gazangabin yielded to Ludwig [2] dextrine, uncrystallisable sugar and organic acids.

Two samples of tamarisk manna have been received in the Indian Museum and examined. The first was a specimen of *tirmi* from Seistan, and the second was called *maki* or tamarisk manna from Dera Ghazi Khan. The tirmi was a soft. gummy, deliquescent substance mixed with a few small leaves. Alcohol separated a large quantity of sugar reducing Fehling 's solution and readily fermenting with yeast. The portion insoluble in alcohol was in white crystals and soluble in half its own weight of water. It melted at 140°C. : the solution was dextro-rotatory, and boiling with diluted acid caused inversion. The sample of *maki* from Dera Ghazi Khan was much darker in colour, and white transparent crystals had separated out which were identified as those of cane sugar. The chief sugar of tamarisk manna is. therefore. not mannite, but a saccharose or cane sugar as has been indicated by previous investigators. The samples contained only traces of nitrogen, esimated by Kjeldahl's process. proving that the exudation, as a food substance. is composed entirely of carbohydrates.

[1] *Comptes Rendus*, 53, 583.
[2] *Archiv der Pharmazie*, 192 (1870), 246.

6. Kathi Kashām: The "Soul-departure" Feast as practised by the Tangkhul Nagas, Manipur, Assam.

By Rev. Wm. Pettigrew, *American Baptist Missionary Union.*

When any person, from the time they commence to suckle, dies, the spirit of such is said to leave the body and turn into an insect called "kahā," a kind of honey-bee, which flies to the roof of the house. In case this metamorphosed spirit wishes to spread its wings outside, a hole is made in the roof directly over the bed of the deceased. In any case where the person dies away from home, and where there is a difficulty in getting back—crossing a river for instance—the person is buried near the place of death, but the skull is brought to the village under the following conditions. The skull is cleaned, wrapped in a cloth, and brought in as far as the river. This obstacle presents a difficulty to the spirit, who is supposed to be travelling with the skull. However, it is got over by passing a thread across. It is necessary to inform the spirit of this new form of tight-rope pedestrianism, so at the river's bank, when all is prepared, a fowl is made to cackle by shaking it; and this is said to be the communication necessary for the spirit to perch itself on the thread, and wend its way across. On burying the skull they cover it with a black cloth, and in place of the trunk left behind, a piece of wood, generally the wooden pillow of the deceased, is attached to the skull, and covered over also with a piece of cloth, to represent the whole person. The dead are buried outside their houses, to the depth of the length of the corpse, plus a margin for top dressing of stones, etc. Where there are no family graves near the house, other graves can be opened, if there has been no burial during the past year. But before doing so a sort of ceremony has to be gone through with the bones of the departed. Some years ago one man of the village was set apart for this particular work. but now the custom is for each family to attend to same. On opening this family grave, the bones are collected, cleaned with water, and then wrapped in a large cloth, new or old, and put on one side of the grave. When a great number of these bones are collected, and there is not sufficient room for a fresh corpse, they are taken out of the tomb; and when the fresh corpse has been buried and covered to the depth of a few feet, the bones are thrown in to help fill up the grave. The bottom of the grave is made circular to hold the corpse and the things buried with it.

Friends are expected to bring gifts for the spirit to take with it after burial. It is believed that these gifts, comprising two spears and cloths, according to circumstance of deceased, also beer (weak and strong), tobacco and pipe, and if the deceased has been musical in his lifetime, his musical instruments, are taken by the spirit to a place called "Kazairam" in the bowels of the earth, where the spirits of the relations departed before are met with on the road. The more plentiful the gifts the more pleased is the spirit towards the giver. Before giving particulars of the burial ceremony, it will be interesting to hear of the further progress of the spirit after it has left the body. After burial the form of the spirit as a "kahā" is lost, and the spirit is supposed to enter the deceased's body again, and in that condition remains under all circumstances. The king of "Kazairam"—what we might call the place of departed spirits—is named Kokto. He is supposed to live in a grand mansion, with sentries guarding all sides, and nobody from the upper world dare enter. On the appearance of any spirit from above before the entrance to this mansion, they find him seated inside the door, and his first duty is to notice what kind of following the spirit has. They are of two kinds, one who has been a thief will be seen with the whole livestock which he has stolen, trailing behind him, and the other will be seen with a following of all the animals procured by honest hunting. As Tangkhul women do not hunt, it is difficult to find out how Kokto distinguishes the weaker sex. However, Kokto judges them all, and after appropriating for himself all the best cloths brought along, he sentences the thieves to go by the road to the left where there are worms and everything dreadful, and the honest spirit turns off to the right, and follows a road which can only be described as clean. It seems, however, that these good and bad spirits meet again further on near the banks of a river. Here the spirits dispose of the gifts they have brought, some to those who have not yet departed from the village, and to those who have, and who are on the other side of the river, the gifts are thrown over to them. After this performance, the difficulty comes in as to how the spirit gets back to the house of the deceased, but the only way out of it seems for the spirit to dodge Kokto, and come up to the upper world another way. However, it has to come back, for there are things to receive and perform before it is finally done with the upper world, and it is with a view to carrying out the final disposal of the spirit that binds these people hand and foot for months, and ruins many in the end. For this reason, also, the feast in connection with same is considered the most important of all, and what seems more surprising, with an absolute belief in the efficacy of everything gone through.

The burial ceremony.—On the day of burial the rich kill a buffalo, others manage a cow, or a pig. They are killed befor e

the grave is dug, and are left whole until the grave is finished. It is then cut up, the relations take half, and the grave-diggers the other half of the intestines. The head is always taken by the nearest male relative, the right hind leg is given to the eldest daughter, the left hind leg to the next daughter. If no daughters of their own, the nieces receive them. The forelegs are given to other distant female relatives. The heart, liver, kidneys, spleen, lungs, etc., are then handed to the "Sherra," the village priest. He first of all divides these portions up, six portions for a male and five for a female, and takes them to the next-door neighbour's house and cooks same. He then brings them to the deceased's house and places them on top of the rice and vegetables which the relatives have brought in during the morning, and placed near the head of the corpse. His next duty is to offer up this food to the "kameo" (evil spirit) by reciting this refrain: "Thisān yāmsanrava, shāiphung shap phungda thulu," and calling upon the dead to eat this offering, takes the special portions on a plate of his own, and throws it away in the compound, where the dead's spirit and the "kameo" is supposed to have appropriated it before touching the ground. The dogs, however, have a meal afterwards. Beer is also offered, and a small portion thrown away. After this ceremony of the priest, the rest of the meat and rice is divided amongst all and eaten before the burial. It is interesting to note here, that no matter what is killed in the village, or at whatever time, feast or otherwise, it is always offered to the "kameo" before eating. The next act is for the "sherra" to take the length and breadth of the bier, and if found too large for the grave, he alone is supposed to cut off any portion necessary. The bier is simply a plank of wood which lies outside ready. The body is then covered over with a clean white cloth before taking it out of the house. In the meantime one of the relations takes a pine torch from a house near by, and descends into the grave, and twirling it round beseeches the ancestors of the dead to come and meet him on his way to "Kazairam." "O āwo āyi! ishāvā rārāli, ungngaroklu" is the prayer made. Then after the "sherra," according to custom, has slightly raised the head of the bier the relations carry it out, and put it on the plank of wood, and on top of same whatever cloths are to be taken to "Kazairam." The top cloth is never torn, as it is meant for Kokto when they meet him. Then the hands of the corpse are washed with water. The bier is lifted by the palms of the hands and taken to the side of the grave. If lifted otherwise the relations will get ill. All the relations now gather round and make great lamentation, and tramp around the grave two or three times. After a final burst of the mourners' refrain by one of the old braves of the village, those who wish to stay and mourn stay on, and the rest leave. Then tightly fastening the body to the

plank, it is placed, with all the gifts for the journey mentioned above, in the grave. The wife is allowed to enter and remain till the last moment. Then around and over the body, to prevent any earth from touching it, is built a stone wall. After filling up with earth the "sherra" is again called to place a pole above the mound, while others place six prongs of wood around a small hole made in the mound, wherein is placed a pine torch. On lighting this they all leave the grave and enter the house. Here all fires have been put out, and all ashes cleared, and on their entering, fresh fire is brought from another house near by. Around this fire the family sit and await for any sign in the fire-place. such as the print of a foot, to see if there are any more deaths to be expected. If there are none it is a favourable sign fortunately. As a final wind-up for the night, the relations portions of meat is cooked and partly eaten, along with the rice and vegetables left over from the morning's feast. At the same time, small portions in six or five pieces, with a small quantity of beer, is offered to "kameo" near the bed of the deceased by the nearest relation. Next morning and evening the pine torch on the grave is again lighted. This is continued for three days. The spirit, after it has had its interview with Kokto, and has handed over the gifts taken with it to the ancestors, is supposed to return the following day after burial. For this reason the family keep all doors open from morning to night, and from that day until the final disposal of the spirit from the village at the great feast of "Kathi Kashām," the family prepare with their own meals a similar one for the spirit. It is then put into a plate used when alive by the deceased, and put on his or her own seat. This is done twice a day. After ten days or a month the parents if a child has died, the wife if a husband, or vice versa, search the village for a person as like as possible in features and size as the deceased to be their representative at the ceremonies of the great feast. Anybody may take on this work, and as it subsequently means the receiving of a good many articles necessary for one's living, the very poor are willing to take it on. On the person asked to represent expressing his or her willingness, the matter remains quiet until the beginning of the feast. For infants also this arrangement is made.

The "Onrā" (memorial stone) ceremony.—Amongst the wealthy, the male member of the family makes a stipulation in his verbal will, that a monument should be erected in memory of him, and the wife and family suffer in consequence, as a great deal of money is spent over it. During the rainy season before the rice begins to bear fruit, all the friends of the deceased gather together at a prominent spot outside the village which serves as a landmark, and which the relations have before decided upon. The night before, a cow is killed and cooked by the males only, half of the intestines taken by the relations, and the

other half by the friends. It is then cooked and divided amongst them, and should there be a goodly number, say 100 or 150, their share is infinitesmal; still it has to go round. This division takes place in the morning, and after all is ready each person divides his small portion again into three pieces, and offers them to "kameo." The three pieces represent (1) the earth, (2) the heavens, (3) his self. With this meat weak rice beer is drunk, and after the feeding is over the strong rice beer is distributed. Then six friends are set apart to carry the wooden images shaped to represent buffalo and dog's heads, and in the case of a brave who has taken heads, an image of himself is made. These are all to be placed on top of the memorial. Following these six friends solemnly walks the "sherra" with suitable portions of cooked meat, and offers up to "kameo" on the proposed spot. His refrain or prayer on this occasion is as follows: "Thinghun lungkārna katatit nana yengmira," at first offering. At second: "Ina mashāi mashakranglaga, nathum shāirilu." At third: "Iwui vāng kho! kharārnosan ungphāzak zāulu." In the meantime the friends are gathering stones, and then the "kameo" offering being over, the earthwork is started and the stones built up all around to the height of 2 feet or more. The artists of the village then paint the different images placed on the memorial, generally with charcoal and lime. The last article to be placed on this memorial is a large stone slab, which is considered the most important stone of all, for on it the spirit is said to come and sit during his occasional peregrination around, to view his rice fields. Any removal of this stone by others means a heavy fine. The shape of this memorial is oblong, with one of the shorter sides more approaching an angle. They are about 20 feet long by 8 feet wide. Pine trees and other trees likely to afford shade to the passer-by are planted on them at the same time. The stones on the sides are used a great deal by the villagers as resting places for themselves and for loads of wood, etc., carried up from the jungle or rice field. The next day and for two days following the family take down a basket of meat and chillies and place it on a raised platform upon which the spirit is supposed to come and partake. They stay for half an hour or so, and go through the same performance at sunset.

The "Wonyāi thing" ceremony.—After the harvest in December has been gathered in, and all instruments in connection with same have been put on one side, in the evening the rich kill a cow, the rest pigs and dogs, and for those whose children have died, eggs are boiled. After cooking same the "sherra" is called in as usual and offers up small portions to "kameo." Next morning the "sherras" from each section of the village gather together in a compound and receive from the relations of the dead special portions of the meat killed the night before, and rice beer. On finding out the number of

persons who died during the past year in each section, the plates and cups of each deceased are brought to them thoroughly cleaned, and put in a row before them. In these plates, etc., are placed the meat and beer. On one side the "sherras" tear off small portions, and arrange three small heaps of same. After all is divided out they take these portions as well as the beer and offer again to "kameo" up and down the rows of plates. After this performance whatever is left they eat, and the plates, etc., are taken back to their respective houses. This being done all friends who come forward to help in erecting the "wonyāi thing" are counted, and to them a liberal supply of meat and beer is distributed. They then go off and bring in the wood and rope necessary to erect this structure. It is a lightly made structure, built outside the door of each deceased's house, and is shaped like a shield with a sort of small platform in front, on which the following day is placed various articles such as Indian corn, roots, pumpkins, etc. The shield framework is covered with sheaves of rice corn, and so arranged that the birds cannot eat same. At the side of this structure is also placed a large clump of the orchid "*Cymbidium giganteum*." All these articles are said to be for the departed spirit to show, as a sign, the fruits of the earth received during the past year. After four or five days friends from other houses and other villages who have not had any deaths during the past year present rice and beer to the mourners, and portions of same are first placed in the deceased's plate, etc., at evening. If this is not done by the friends it is feared it will be their share to receive death in their midst the following year. After all have come in with these gifts, the arrangements for the final disposal of the spirit commences, and this feast, the most important of the year, is called "Kathi Kashām."

The "Kathi Kashām" Feast.

This takes place about the end of January of each year. The first thing for each family to do is to procure their buffaloes, cows, pigs and dogs. After they have procured these from near and far, the headmen of the village give orders for the beer, weak and strong, to be prepared for fermentation, and they also, after a palaver, decide what day the feast shall commence. It is a ten-day feast, and I give below particulars of each day's work.

First day.—The rope for binding up the animals before killing is procured from the jungle, also the poles for hanging cloths up (see fifth day).

Second day.—These ropes are prepared so as to withstand any strain by the animals when being killed. This work of the first and second day is performed by the males, the women, in the meantime, gathering and stacking wood in each house.

Third day.—This is the day for killing buffaloes and cows. Their mode of killing is very cruel, and would not be tolerated for a moment in any civilised state. In the more northern villages the poor animals are tied down and subject to much torture, the animal being cut to pieces piecemeal with knives and spears, and no attempt to end its life before almost the last shred of flesh has been torn away and the limbs torn from their sockets. It is considered quite a sight, and crowds gather round, and even sit on the house-tops, and gaze on this horrible butcher's work. After the cutting-up process in the whole village is over, the division and distribution takes place in the same way as performed on the death of the person, and of course the "sherra" is called in to offer to "kameo."

Fourth day.—Both males and females join together in getting in a plentiful supply of wood; and as there is much entertaining during this feast, and all night singing and dancing performed, there is need of plenty of fires, it being the coldest part of the year. The representative of the dead finds his first occupation on this day by collecting "khamuinā," a kind of broad plantain leaf used for the unleavened bread made the next day.

Fifth day.—Unleavened bread is made into small cakes, and pigs and dogs killed, cut up into small pieces, cooked and offered to "kameo" and then distributed with a small cake of bread wrapped in the "khamuinā" leaves, amongst the mourners in each section of the village. On this day also cloths of all kinds and qualities are attached to long poles and erected outside each house of the dead. The more cloths displayed the greater one is thought of.

Sixth day.—This is occupied in preparing the rice beer which has been fermenting for some days in large casks, and any other work not finished on previous days is completed.

Seventh day.—This is the day when the real excitement commences. Friends and relations from villages around come in during the afternoon, and at sunset. Before their arrival the females only give an offering to "kameo" in the shape of a sandwich of unleavened bread, sesamum seed concoction, and slices of pork, which after being offered to "kameo" by the "sherra" is placed on the platform of the "wonyāi thing." With this is also placed four pots of beer (weak and strong). After the arrival of villagers each family of the dead calls for its representative or "thilā kapo" as he is called. He in the meantime has been decked with bright head-gear, necklaces, armlets, and leglets. On his arrival at the house he performs a dance outside, and then on entering is introduced to the seat of the dead. From this point until the end of the feast he is looked upon as the dead person in life, and just as we would treat a friend or relation who was going on a long journey, with no prospect of seeing him again, so is this "thilā kapo" looked

upon by the family and treated accordingly. He is presented with all the food cooked, and as the head of the house for the time being dispenses hospitality. On this evening in particular there are high jinks performed in each house. What with eating, drinking and dancing, I am afraid they think more of their own enjoyment than of the dead. Before the day is over the cloths hung upon poles in each compound, after having been seen and admired, or otherwise, by the villagers, are taken down and brought into the house to be given to the representative later on.

Eighth day.—This day is mostly taken up with commercial pursuits, in the buying and selling of cloths, etc., brought in by the villagers. The representatives of the dead also give the villagers a specimen of their dancing powers in the large space called "Laingapha kayāng" situated in the midst of the village. They are, of course, dressed up for the occasion. The "sherras" during this performance cut up a portion of the skins of the pigs killed on the fifth day and offer to "kameo." The remaining skin of all the animals killed is eventually cooked and eaten with the other portions. After this exhibition by the "thilā kapo" they are taken and fed by the female relations, going from house to house, receiving the cloths brought in the previous night, so that by the time he has finished visiting there is a goodly pile, and he takes the first opportunity to sell all he does not require for himself, or for herself, if the representative happens to be a female.

Ninth day.—The great day of the feast. The first thing in the morning one of the family searches for plantain leaves to cover the pine torch handles, etc. These torches are made extra large, and laid aside for use at sunset. A further dish of pig's meat and rice is next prepared and placed on large plates, with salt and fish, and brought on the compound. Next a great gathering of all friends and relations with each representative. They meet at the lowest point of the village where a death has occurred, each one carrying his or her load of meat, ginger, rice beer, and cloths already given to the representative. These are all placed on mats in a row. Empty plates and pots are placed in a row near, and are then filled up. Everybody is dressed up for the occasion, especially the representatives. When all is ready some old priest of the village gives a great shout, "He, hiaina tātang tārangsa," and at this everybody suddenly takes hold of the plates and pots, etc., and holding them up above their heads, take all to the "thilā kapos'" houses. They are supposed to have another meal here, but as it is a question of eating and drinking all day long, they, if they are not gluttonous, content themselves with a small portion. They now take the place of receiving guests, friends and relations who wish to say farewell, as they are now on the point of leaving for good. First to receive a parting gift is the head

of the deceased's house, who receives a cloth from the "thilā kapo." Then come along the widows of the village, but instead of giving anything, they receive a parting gift of meat and beer from him or her. After the widows come the female relations who entertained them the day before, and they also receive a present of meat and beer—a sort of mutual give and take before the final parting. It is sunset now, and a procession is formed. At the head of same march the torch-bearers, with the leaves gathered early morning wound round their heads and shoulders to keep off sparks from the flaming torches. Behind these march a crowd of elders dressed in their war garb, and lastly the "thilā kapo," the representatives of the dead, follow with relations crowding around them, and with much lamenting and grief the procession proceeds slowly on its way towards "Zaiphar," a spot at the north end of the village overshadowed by a large tree. To this spot the torch-bearers wend their way. The idea is that the spirits need to be led in the gathering twilight to show them the way to their final place of abode "Kazairam," and the warriors are also needed as a guard to keep them from all harm on the way there. The spirit is supposed to enter into, or rather are turned into these lighted torches as soon as they are thrown down at "Zaiphar." By the time these torches have reached this place, the "thilā kapo" have reached the limit of the village boundary, and on the supposition that the spirit has left to proceed on its way as a torch to "Kazairam," these representatives are at once denuded of all their finery. The head-gear is broken up on the spot, and as far as these individuals are concerned, their representative work is over. All the villagers return to their homes, the torch-bearers having already returned by another route. Before entering their houses, the "wonyāi thing" structure erected outside is pulled down, and the poles over the grave are pulled out and thrown away. At the front door, just inside the house, a pine torch is lighted and placed on a stone. This is done for the purpose of not allowing the spirits of the living to go off with the spirits of the dead just got rid of.

The spirit after entering the torches are declared to wend their way during the evening towards the hills on the north, and finally disappear to find themselves crossing the river in "Kazairam." On that side of the river they are believed to commence and carry on an existence similar to that enjoyed, or otherwise, when alive on earth. The wealthy enjoy their wealth again, and the poor eke out the precarious existence suffered on earth.

Tenth day.—This and the following few days are practically days of rest, and the only thing recognized is the supposition that the embodied spirits in "Kazairam" cut all their hair off on the tenth day, and have a sort of "wash and brush up"

to remove all connection with mother earth. On this day therefore, no one is supposed to bathe or touch water. As the majority of the adults are in a state of *non compose mentis* after the carousals of the past few days, it is the most natural thing for them to take a rest.

In conclusion I need hardly say that the expense involved in carrying out these ceremonies, from the day the person dies till the spirit is finally disposed of, is very great, and in the majority of cases where the husband and father dies, rice cultivations and even the houses are sold, debts are incurred, and one can imagine how disastrous is the result of all this blind superstition and ignorance in the case of a wife with children.

There are no less than seven occasions for sacrificing and offering to evil spirits during this feast, *viz* :—

(1) At burial.
(2) At "Onrā" (memorial stone) erection.
(3) At erection of "Wonyāi thing."
(4) At killing of buffaloes and cows (third day of feast).
(5) At killing of pigs and dogs (fifth day of feast).
(6) At sandwich making by females (seventh day of feast).
(7) At dancing on eighth day of feast.

7. A new MS. of Buddha Carita.

By Mahāmahopādhyāya Haraprasāda Shāstrī.

In the bundle marked 364, of the third collection of MSS. in the Durbar Library, Nepal, there are seven palm-leaf MSS., one of which is a MS. of Buddhacarita of Asvaghoṣa, written in a very ancient character—I mean, for Palæography—of a period when Bengali and Newari had not become two distinct characters. It is in fact more Bengali than Newari, and may belong to the 12th century A.D. It did not form an integral part of the ancient Royal Library of Nepal. It was presented within the last ten years by Divyadeva to Mahārājā Sir Bir Samsher Jang Bahadur Rānā, along with other MSS. Amṛtānanda, Brian Hodgson's Paṇḍit, prepared two copies of Buddhacarita for Europe. Cowell, in the preface to his edition of the Buddhacarita, gives us all the information about the imperfections of these copies, and tells us how Amṛtānanda, after a fruitless search for a complete MS., added more than three and a half cantos of his own composition to complete the work.

Amṛtānanda does not seem to have had access to Divyadeva's MS. For in that case his copy would have been free from many lacunæ and many imperfections. The new MS. begins with leaf 3 and goes on to the 55th leaf and ends in the middle of the 14th canto. The first complete verse of this MS. is the 46th verse in Cowell's edition. The last portion of the 45th verse in Cowell is विराजितश्चोभयपार्श्वतस्तत्. But the incomplete verse with which our MS. begins is चैवचनो निरोधः. It is well known that the first page of the first leaf of an Indian MS. is generally left blank. So in our MS. three pages are missing, 1a, 2a, and 2b. By counting letters of each line, I came to the conclusion that one page contains $8\frac{1}{2}$ Upajāti verses, in which the first canto is written. So altogether in these two leaves 25 verses would be missing. But according to Cowell's edition 45 verses are missing. That the additional 20 verses came from the pen of Amritānanda seems to be extremely probable. And the condition of the 45th verse throws a shadow of doubt as to the authenticity of all the figs.

I carefully compared Cowell's edition of Buddhacarita with the new MS., and the most important thing that I laid my hands on is a passage consisting of $11\frac{1}{2}$ verses, which was a lacuna in Cowell's work. The lacuna commences from the middle of the 2nd line of verse 41 in chapter 9 of Cowell's edition. Cowell conjecturally emends one letter न, which

he puts in square brackets. But his conjecture is wrong. Our MS. makes it र. The 11 verses are :—

ग्राह।कुलं चास्थिरमारविन्दम् राज्यं हि रम्यं व्यसनाश्रयञ्च ॥

इत्यञ्च राज्यं न सुखं न धर्म्यं पूर्व्वे तथाजातघृणा नरेन्द्राः ।

वयःप्रकर्षेऽपरिहार्य्यदुःखे राज्यानि मुक्ता वनमेव जग्मुः ॥

चिरं हि मुक्तानि तृणान्यरण्ये चिषंकवो (?) रत्नानिवोपगुप्तः ।

सहोषितं श्रीसुलभै र्न चैव दोषैरदृश्यैरिव कृष्णसर्पैः ॥

श्लाघ्यं हि राज्यानि विहाय राज्ञाम् धर्म्माभिलाषेण वनं प्रवेष्टुम् ,

भग्नप्रतिज्ञस्य ननूपपन्नम् वनं परित्यज्य गृहं प्रवेष्टुम् ॥

जातः कुले कोऽपि नरः ससत्त्वो धर्म्माभिलाषेण वनं प्रविष्टः ।

काषायमुत्सृज्य विमुक्तलज्जः पुरन्दरस्यापि पुरं श्रयेत ॥

लोभात् विमोहादथवा भयेन यो वान्तमन्नं पुनराददीत ।

लोभात् स मोहादथवा भयेन संत्यज्य कामान् पुनरादधीत ॥

यश्च प्रदीप्ताच्छरणात्कथञ्चित् निष्क्रम्य भूयः प्रविशेत्तदेव ।

गार्हस्थ्यमुत्सृज्य स दृष्टदोषो मोहेन भूयोऽभिलषेत् ग्रहीतुम् ॥

वह्नेश्च तोयस्य च नास्ति सन्धिः शठस्य सत्यस्य च नास्ति सन्धिः ।

आर्य्यस्य पापस्य च नास्ति सन्धिः सामस्य(?)दण्डस्य च नास्ति सन्धिः ॥

या च श्रुतिः मोक्षमवाप्तवन्तो नृपा गृहस्था इति नैतदस्ति ।

सामप्रधानः क्व च मोक्षधर्म्मः दण्डप्रधानः क्व च राजधर्म्मः ॥

श्रमे रतिश्चेत् शिथिलश्च राज्यम् राज्ये मतिश्चेत् श्रमविह्वलश्च ।

श्रमश्च तैक्ष्ण्यञ्च हि नोपपन्नं शीतोष्णयोरैक्यमिवोदकाग्न्योः ॥

तन्निश्चयाद्वा वसुधाधिपास्ते राज्यानि मुक्ता श्रममाप्तवन्तः ।

राज्यार्हिता वा निभृतेन्द्रियत्वात् क्वनैष्ठिके मोक्षकृताभिमानाः ॥

तेषाञ्च राज्येऽस्तु श्रमो यथावत् प्राप्तोवनं मोहमनिश्चयेन ।

क्षित्वा हि पाशं गृहबन्धसङ्गं मुक्तः पुनर्न प्रविविक्षुरस्मि ॥

These 11 verses complete the sense of the context. But these have been translated in the Chinese version in 16 verses. The 41st verse is clearly split up into two, 718 and 719. New matter has often been introduced and matter in the text omitted. This does not speak well for the faithfulness of

Chinese translations. The translator of Buddhacarita was Dharma Rakṣa, a paṇḍit of mid India, who worked for nearly half a century at translations in China, and he is always regarded as a trustworthy authority. But his translation is not a sure guide to the original text, specially when it is a lost work.

In order to give a general idea of Cowell's Translation of the Sanskrit Buddhacarita as compared with Beal's Translation of the Chinese version of the same work, I subjoin a comparative table of the verses in each canto in the two Translations.

Canto	Cowell	Beal
1	94	126
2	56	61
3	65	66
4	103	69
5	87	95
6	68	77
7	58	75
8	87	95
9	72	112
10	41	50
11	75	92
12	118	116
13	73	76

The table shows that the Chinese translation was at best a free one and not a close translation.

In many quarters it is believed that the MS. Treasures of Nepal are being exhausted, and this belief found an expression in our Annual Address of 1907. But the discovery of this important MS. at the Library of Divyadeva and the new collection of nearly four hundred MSS. given to the Durbar Library within last ten years, and other circumstances which I do not consider prudent to reveal, has led me to arrive at a diametrically opposite conclusion—that the country has not yet been systematically explored and that many Buddhist Sanskrit texts will be recovered from Nepal, which are known only in their Tibetan or Chinese Translations—and many which are not known either in translation or in original.

Acc. Bot. Garden
1913

8. Certain Disputed or Doubtful Events in the History of Bengal, Early Musalman Period. Part II.

By Monmohan Chakravarti, M.A., B.L., M.R.A.S.

Part I published in the last April number of this Journal dealt with the beginning of the Musalmān period in Bengal, 595 to 628 H. Two of the points dealt therein require further notice. Firstly, Major Raverty's assertions, 589 H. for Muḥammad-i-Bakht-yār's sack of Bihār city, and 590 H. for his sack of Nūdīah, were not discussed in part I, having been already noticed in a previous article of mine, J.A.S.B., N.S., Vol. I, No. 3, p. 49, 1905. On this subject the following passage in the *Tabaḳāt-i-Nāṣirī* (pp. 516—520) appears to have some bearing :—

Sack of Bihār and Nūdīah.

"Subsequently in the year 591 H. Thankīr was taken; and in 593 H. Kuṭb-ud-dīn marched towards Nahrwālah, and attacked Rāe Bhīm Dīw, and took vengeance upon that tribe for the Sulṭān-i-Ghāzī. He likewise subdued other territories of Hindustan, as far east as the frontier of the territory of Ujjain; and Malik 'Izz-ud-dīn Muḥammad, son of Bakht-yār, the Khalj, in his time and during his government, subdued the cities of Bihār and Nūdīah, and that country, as will be hereafter recorded."

The sequence of events in the above narration implies that the sack of Bihār took place after 593 H.

Coins of 'Iwaz.

Secondly, additional coins of Husam-ud-dīn 'Iwaz, the earliest Sulṭān of Bengal to coin in his own name, have been described in the J.A.S.B., 1881, Vol. 50, part I, pp. 57 and 67, and in the catalogues of the British Museum (p. 9), and of the Indian Museum (ed. 1907, ii. 145-6). They confirm the fact that he was in complete independence between 616 H. and 622 H. The mint name on the unique gold coin of I-yal-timish, dated 616 H., read as *ẓarb ba Gaur*, may also be read *ẓarb Nagor*; and therefore the conclusion that up to 616 H. 'Iwaz acknowledged the nominal suzerainty of the Delhi Sulṭān, is not free from doubts.

(IV) Malik Saif-ud-dīn Ībak-i-Yughan-tat.

His Date of Accession.

He succeeded 'Alā-ud-dīn Jānī[1] who had been deposed (*Tab.*, p. 731); but the time of his taking charge is nowhere mentioned.

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[1] Raverty's identification of him with 'Izz-ud-dīn Jānī, the governor of Bihār under I-yāl-timish in 622 H. (*vide* note below p. 772), is doubtful, as the surnames are so different.

It must be earlier than 631 H., when he died (pp. 732, 736); and its anterior limit is fixed by the statement that his place in Bihār was taken by 'Izz-ud-dīn Ṭughril-i-Tughān Khān, who had been appointed the feudatory of Badāūn in 630 H. Saif-ud-dīn's accession as Malik of Lakhaṇawaṭī thus falls either in the latter part of 630 H. or in the beginning of 631 H. (initial date, 7th October, 1233 A.D.), which would still allow him a rule "for some time" (p. 732).

(V) Malik 'Izz-ud-din Ṭughril-i Ṭughān Khān.

He ruled somewhat long for that troublous time (631-642 H. = 1233-1244 A.D.). His time is interesting for the earliest existing coins and inscriptions of the Delhi Sulṭāns in Bengal. The oldest Musalman inscription in Bengal as yet found is at Gaur and is dated 633 H. (beginning on 16th September, 1235 A.D.). It records the digging up of a well in the reign of Iltitmish by one Kutlugh Khān, the sword-bearer (*Arch. Surv. Ind.*, vol. xv, p. 45). The oldest known Musalman inscription in Bihār is of Maḥarram 640 H. (beginning 1st July, 1242 A.D.). It was found in the great Dargah of Bihār town, and states that the building was erected during the rule of "Abul Fath Tughril-us-sulṭānī" (J.A.S.B., 1873, Vol. 42, pt. I, pp. 245-6). The date and the name thus point to the above Malik.

Earliest Musalman Inscriptions.

With reference to coins, the mint name on a coin of I-yaltimish dated 633 H. was read as Lakhnautī (J.A.S.B., Vol. 50, pt. I, 1881, p. 66); and if correct it would have been the earliest coin of the Delhi sulṭāns with this Bengal mint. But the reading is very doubtful (*Ind. Mus. Cat.*, ii, p. 21, No. 38, and Introd., p. 6). Their earliest known coins with Lakhnautī mint began in the rule of the female sovereign Jalālat-ud-dīn Raziya (J.R.A.S., ii, p. 186; J.A.S.B., 1881, pp. 66-7). They belong to two years, 634 and 635 H., in 634 after 18th Rabi-ul-awwal (19th November, 1236), the date of her predecessor's death (*Tab.*, pp. 636-7).

Earliest Dehli Coins, Mint Lakhnautī.

In connection with the above Bihār inscription, Blochmann's remark that "South Bihār was under the Lak'hnautī governors from Bakhtyār Khilji's time" requires much modification, as the following resume will show. After the sack of Bihār town in 598 H., it formed a part of Muḥammad-i Bakhtyār's territory up to his death, though he removed his headquarters to Lakhaṇawaṭī. During the internecine fights in the time of his two successors, the Amīrs in possession were in nominal dependence on Lakhaṇawaṭī, if at all; and it was not till Husam-ud-dīn 'Iwaz's time that Bihār was again brought

Connection of Bihār with Lakhaṇawaṭi.

under regular subjection of Lakhaṇawaṭī. On several occasions I-yal-timish sent forces recovering possession thereof and putting his own men in charge; but the latter were soon driven out. In 622 H. I-yal-timish himself marched against Lakhaṇawaṭī, and compelling 'Iwaz to acknowledge his suzerainty, put 'Izz-ud-dīn Jānī in separate charge of Bihār. But as soon as the imperial standards were withdrawn, 'Iwaz turned Jānī out by force. In 624 H., at the instigation of the said 'Izz-ud-dīn Jānī, the eldest son of I-yal-timish moved from Awadh towards Bengal, defeated and killed 'Iwaz, and took possession of Lakhaṇawaṭī with apparently Bihār. On his death Daulat Shāh-i-Balkā rebelled in Lakhaṇawaṭi, but it is not clear what became of Bihār. In 628 H. I-yal-timish marched against the rebel, and after defeating him put Bihār under a separate governor. Two governors are mentioned, Saif-ud-dīn Ībak and his succsesor Tughril-i-Tughān Khān. The latter when appointed governor of Lakhaṇawaṭī succeeded in keeping Bihār. Nothing further is mentioned about this province in the *Tabakāṭ-i*. During the good-natured but feeble reign of Nāṣir-ud-dīn Maḥmud Shāh (644-664 H.), both provinces seem to have continued as a joint fief under the same feudatory (cf. the Bārahdari inscription, Bihār, dated 663 H.).

(VI) [Malik Ikhtiyār-ud-dīn Yūz-bak-i-Tughril Khān, *alias* Sulṭān Mugh-iṣ-ud-dīn.]

Dates of his Independence and Death.

Of this Malik's rule in Bengal, the *Ṭabaḳāt-i* unfortunately gives no dates and even omits to say whom he succeeded. The preceding date given is 29th Shawwal 644 H. (9th March, 1247 A.D.), when died Malik Ḳamar-ud-dīn Ḳi-rān-i-Tamur Khān-us-Sulṭānī (also written Tamur Khān-i-Ḳi-rān).

The coins, luckily, throw some though rather a faint light. In a small hoard discovered at Gauhāṭi, Assam, two coins with the mint Lakhnautī bear the date 653 H. and the name Mughiṣ-ud-dīn (J.A.S.B., 1881, Vol. 50, pt. I, p. 61, Nos. 11 and 12; Ind. Mus. Cat., ii, p. 146, No. 6). This title the Malik adopted when he assumed independence (*Tab.*, pp. 763-4). Another coin with the mint Lakhnautī and the Sulṭān's name Maḥmūd has in the margin with other illegible letters, the word Yūz-bak, and the date 65*, the unit figure being uncertain, probably 1 or 2 (*Chronicles*, pp. 128-9, No. 110; J.A.S.B., Vol. 50, pt. I, 1881, pp. 68-9, 60; Ind. Mus. Cat., ii, p. 33, No. 140). At that time therefore the Delhi Sulṭān, Maḥmūd, was acknowledged as suzerain. The assumption of independence would have been made some time after this, say between 651 and 653 H. Mughiṣ-ud-dīn invaded Kāmrūp, but on account of floods after the spring harvest had to retreat; he

was struck with an arrow, was captured by the Hindus, and died from the effects of his wounds (*Tab.*, pp. 765-6). Another coin with the mint Lakhnautī and date safar 655 H. (beginning on 18th February, 1257 A.D.) is found to bear the name of the Delhi Sulṭān Maḥmūd (J.A.S.B., Vol. 50, pt. I, 1881, p. 69, No. 30; Ind. Mus. Cat., ii, p. 32, No. 138). This was obviously coined by a local governor who acknowledged the suzerainty of the Delhi Sulṭān; and the independent Sulṭān Mughiṣ-ud-dīn had apparently died before this time, probably in the rains of 654 H. The coins thus indicate that he had assumed independence by at least 653 H. (initial date, 10th February, 1255 A.D.), and died in June–July of 654 H. (initial date 30th January, 1256 A.D.).

The legends on the two Gauhāṭi coins of 653 H. note that they had been coined from the revenues of Badan and Nawadiya. If Nawadiya be Nadiyā as Dr. Hoernle suggests, then Yūzbak-i Ṭughril Khān had carried the Musalman rule much southwards.

(VII) Malik 'Izz-ud-dīn Balban-i Yūz-baki.

His Rule.

No clear account is traceable in the *Tabaḳāt-i* regarding the immediate succession of the deceased Yūz-bak-i Tughril Khān. From scattered notices it would appear that in 656 H. the Malik Balban-i Yūz-bakī was in possession. Having been invested with the government of Lakhaṇawaṭī, he sent large presents to the Sulṭān, two elephants, treasures and other valuables, which arrived at Delhi on 4th Jumādi-ul-ākhir 657 H. (29th April, 1259 A.D.). In the meantime under the patronage of Ulugh Khān-i-Azam, the fief of Lakhaṇawaṭī had been conferred on Jalāl-ud-dīn Ma'sūd (*alias* Ḳulich) Khān, son of 'Alā-ud-dīn-Jānī, on 18th Zilhijjah 656 H. or 16th December, 1258 A.D. (p. 712), within two months after his presentation at the Durbār on 27th Shawwal (pp. 848-9). But the receipt of presents from Bengal induced the all-powerful minister Ulugh Khān to exert himself in the sender's favour, and Balban-i Yūz-bakī was confirmed in his possession. He could not, however, have ruled long. Tāj-ud-dīn Arsalān Khān Sanjai-i-Chast, the governor of Karah and an old colleague of Jalāl-ud-dīn, soon after "the beginning" of 657 H. invaded suddenly and captured the city of Lakhaṇawaṭī. Balban-i Yūzbakī, who had gone out on an expedition to Bang, hurried back, but was defeated, captured and killed (pp. 769-770).

The Rule of Jalāl-ud-dīn.

Jalāl-ud-dīn Ma'sūd Khān appears to have ruled for some time. Though *Tabaḳāt-i* is silent, this can be inferred from a fine inscription in a mosque at Gaṅgārāmpur near Maldah. It records the erection of the building in the time of

Jalal-ul-hak Ma'sūd Shāh Jānī in the reign of Nāṣir-ud-duniya Abul Muẓaffar Maḥmūd Shāh on the first of Maharram 647 H., or 16th April, 1249 A.D. (A.S.R., xv, p. 45, pl. xxi). Ma'sud Jānī's rule thus fills in to some extent the gap between Kirāne-i-Tamur Khān's and Yūzbak-i-Tughril Khān's viceroyalty.

(VIII) Tātār Khān.

His vassalage.

The only material fact known about this Malik is that given in the *Tārīkh-i Fīroz Shāhī* of Zīā-ud-dīn Barni: "In the first year of the reign [of Sulṭān Ghiyās-ud-dīn Balban], sixty three elephants were sent by Tātār Khān, son of Arslān Khān, from Lakhnauṭī to Delhi, which greatly pleased the people, and was the occasion of great public rejoicing" (Elliot, iii, p. 103). Tātār Khān was therefore ruling in 664 H. (initial date 13th October, 1265 A.D.), and possibly from some time before, but how long before there are no data to decide. One can only hazard a guess that he likely succeeded his father Arslān Khān, who had dispossessed Balban-i Yūz-baki in 657 H.

His coins.

According to Firishtah Tātār Khān coined money in his own name (*l.c.*, J.A.S.B., 1874, Vol. 43, pt. I, p. 287). This means an assumption of complete independence, and is not consistent with the despatch of elephants to Delhi on the accession of Balban, evidently as a vassal. No coins of his, if any coined, has yet been brought to light. It is also not known how long he ruled after 664 H., or how his rule came to an end. Badaoni's history names two governors after him, Sher Khān and then Amin Khān (Translation, i, p. 186), but gives no details.

Inscription.

An inscription found in the yard facing the shrine of Shāh Fazl-ullah, Bārahdari Mahallah, Bihār, is dated 663 H., 18th Jumāda I (8th March, 1265 A.D.). Its first half with the name of the governor is unfortunately missing; but Blochmann ascribed it to this Muḥammad[-i-] Arsalān Tātār Khān (J.A.S.B., vol. 42, pt. I, 1873, p. 247). If the attribution be correct, Bihār formed at the time a part of Lakhaṇawatī.

9. On a Goniomya from the Cretaceous Rocks of Southern India.

By H. C. Das-Gupta.

Some time ago, with the kind permission of the Director of the Geological Survey of India, I had an opportunity of examining some lamellibranchs collected by Mr. Foote from Southern India. Most of the fossils belong to species already described by Stoliczka.[1] Among them there occurs, however, a specimen of *Goniomya*, a genus which had not previously been recorded amongst the fauna of Southern India.

The specimen comes from the neighbourhood of Odium and it belongs to the Utatur series, the lowest member of the Cretaceous of Southern India, including, according to de Grossouvre[2], beds extending downward into the horizon of the Gault. The fossil is represented by a cast of the right valve, and although poorly preserved, the peculiar sculpturing of the valve leaves no room for any doubt as to the generic determination. It belongs to the group of the *ovales*. *Goniomya* ranges from Upper Lias to Cenomanian, the maximum development of the genus being in the Middle and Upper Jurassic times, which period also corresponds with the maximum development of the *ovales*. The latest form of the group of *ovales* to which I can find any reference is *G.* (*Lysianassa*) *designata*, Goldf.[3], from the Cenomanian of Westphalia and Cleve. The Southern Indian specimen is specifically different, but it is not sufficiently well preserved for an exact diagnosis.

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1 *Pal. Ind.*, Ser. VI, vol. iii.
2 *Mem. la carte Geol. det. de la France Sur Craie super*, pt. 1, fasc. ii.
3 *Petr. Germ*, tab. 154, fig. 13.

FEBRUARY, 1909.

The Annual Meeting of the Society was held on Wednesday, the 3rd February, 1909, at 9-15 P.M.

The Hon. Mr. Justice Asutosh Mukhopadhyaya, M.A., D.L., D.Sc., President, in the chair.

The following members were present :—

Maulavi Abdus Salam, Dr. N. Annandale, Mr. I. H. Burkill, Mr. B. L. Chaudhuri, Mr. J. A Cunningham, Mr. L. L. Fermor, Rev. E. Francotte, S.J., Dr. Birendra Nath Ghosh, Babu Roormall Goenka, Mr. H. G. Graves, Mr. H. H. Hayden, The Hon. Mr. Justice H. Holmwood, Sir Thomas Holland, K.C.I.E., Mr. D. Hooper, Mr. W. A. Lee, Mr. R. D. Mehta, C.I.E., Mr. C. W. McMinn, Mr. W. H. Miles, Babu Govindalal Mukerjee, Hon. Mr. C. A. E. W. Oldham, Dr. T. F. Pearse, Rev. A. C. Ridsdale, Major L. Rogers, I.M.S., Pandit Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha, Dr. C. Schulten, Mr. A. C. Sen, Mahamahopadhyaya Haraprasad Shastri, Miss Cornelia Sorabjee, Babu Kshitindra Nath Tagore, Mr. G. H. Tipper, Dr. Satis Chandra Vidyabhusana, Mr. E. Vredenburg, Mr. W. C. Wordsworth, Rev. A. W. Young, and others.

Visitors :—Hon. Mr. M. B. Dadabhoy, Babu Hem Chandra Das Gupta, Mr. D. G. Grühl, Mrs. C. B. M. Haarbleicher, Rev. H. Hosten, S.J., Mr. G. Woodhams.

The President ordered the distribution of the voting papers for the election of Officers and Members of Council for 1909, and appointed Messrs. P. J. Brühl and L. L. Fermor to be scrutineers.

The President announced that no essays had been received for the Elliott Prize Competition for the year 1908.

The President also announced that the Barclay Memorial Medal for the year 1909 has been offered to Lieut.-Colonel David Prain, M.A., M.B., LL.D., F.R.S., I.M.S. (retired).

The President called upon the Secretary to read the Annual Report.

Annual Report for 1908.

The Council of the Society has the honour to submit the following report on the state of the Society's affairs during the year ending 31st December, 1908.

Member List.

The number of Ordinary Members at the close of the year was 448.

Sixty-one Ordinary Members were elected during 1908. Out of these 4 have not yet paid their entrance fees; the election of 2 Members has been cancelled at their own request; and the election of 3 more has become null and void under Rule 9. The number of Ordinary Members, therefore, added to the list was 52, in addition to another 2 elected in 1907, who have paid their entrance fees during the year, making a total of 54 Ordinary Members added to the last list. On the other hand, 13 withdrew, 7 died, and 4 were struck off under Rule 40, while the names of 2 Members (one a Special Non-Subscribing Member) have been transferred from the list of Ordinary Members to the list of Honorary Members.

The following table gives the statistics for the past six years :—

Year.	Paying.				Non-paying.				Total.
	Resident.	Non-Resident.	Foreign.	Total.	Life.	Absent.	Special Non-Subscribing.	Total.	
1903 ..	127	126	15	261	21	45	1	67	335
1904 ..	132	130	14	276	21	45	1	67	343
1905 ..	144	133	12	288	20	47	1	68	357
1906 ..	173	147	15	335	20	51	1	72	407
1907 ..	174	175	20	369	20	30	1	51	420
1908 ..	181	193	17	391	19	38	—	57	448

The names of Ordinary Members whose death we lament were, Lieut. R. E. Bate, 27th Punjabis, Dr. H. C. Garth, Mr. J. F. Hewett, Maharaja Sir Jotendra Mohan Tagore Bahadur,

Dr. Mirza Mohammad Masoom, Lt.-Col. F. S. Peck, I.M.S., and Sir Dietrich Brandis (Life Member).

The number of Honorary Members is complete. We have to lament the loss of Lt.-Col. Sir Richard Strachey and Prof. F. Keilhorn. Lt.-Col. H. H. Godwin Austin, F.R.S., Prof. M. Treub, Dr. H. Oldenberg and Mr. W. Irvine were elected Honorary Members.

The number of the Special Centenary Members remains unchanged since last year.

Among the Associate Members, we have to lament the loss of the Revd. Father E. Lafont, S.J., and Rai Bahadur Ram Brahma Sanyal. During the year we have elected Babu Dines Chandra Sen, Mahamahopadhyaya Sudhakara Dvivedi and the Revd. Father J. Hoffmann, S.J. The number now stands at 13, leaving two vacancies.

Indian Museum.

During the year there have been two vacancies amongst the Trustees. Mr. G. W. Küchler ceased to be a Trustee under section 3, clause 5, of the Indian Museum Act IV of 1887, and was succeeded by Lt.-Col. G. F. A. Harris, M.D., F.R.C.P., I.M.S.; and in consequence of Lt.-Col. D. C. Phillott leaving India on furlough, Dr. G. Thibaut, C.I.E., Ph.D., D.Sc., was appointed to act for him. The other Trustees who represent the Society are Sir Thomas Holland, K.C.I.E., the Hon'ble Mr. Justice Asutosh Mukhopadhyaya, M.A., D.L., and Mr. R. P. Ashton.

Finance.

The accounts of the Society are shown in the Appendix under the usual heads. Statement No. 12 contains the Balance Sheet of the Society and of the different funds administered through it.

The credit balance of the Society at the close of the year was Rs. 1,89,731-7-0, against Rs. 1,81,836-15-6 at the close of the preceding year, which shows an increase in the financial position by about eight thousand rupees.

The Budget for the year 1908 was estimated at the following figures:—Receipts Rs. 22,830, Expenditures Rs. 22,760.

The actual receipts for the year, exclusive of entrance fees, and subscription to the 125th Anniversary Entertainment Fund, have amounted to Rs. 23,451-7-4. In addition to this, the sum of Rs. 1,760 has been received as Entrance fees, and the sum of Rs. 800 as subscription to the Anniversary Entertainment Fund of the Society, or about Rs. 3,200 in excess of the estimate. The sum of Rs 1,750 from the Entrance fees has been credited to the Reserve Fund. The total receipts for the year have been Rs. 26,011-7-4. The receipts have exceeded

the estimate under the heads of "Members' Subscriptions," "Subscriptions for the Society's *Journal and Proceedings* and *Memoirs*," and "Interest on Investments," the excess amounts received being respectively Rs. 937, Rs. 100 and Rs. 95. The receipts have fallen short of the estimate under the following heads: "Sale of Publications" shows a decrease owing to certain sale proceeds not having been received during the year. "Rent of Room" is reduced on account of non-receipt of rent from the Automobile Association of Bengal, and "Miscellaneous" has fallen off very slightly.

The expenditure was estimated at Rs. 22,760. Of this sum, Rs. 1,500 provided for the "Library Catalogue" was not utilised. The actual amount paid out amounted to Rs. 23,015-10-4, or about Rs. 256 in excess of the estimate.

During the year the Council sanctioned the following extraordinary expenditures: "Salary," Rs. 235, pay for Babu Gokul Nath Dhar, B.A., an extra clerk, and a duftry for six months; "Pension," Rs. 125, owing to the retirement of of Babu Jogesh Chandra Chatterji on Rs. 15 per mensem; "Postage," Rs. 70, for despatching Index to Punjab Notes and Queries and Sir George King's Materials for a Flora of the Malayan Peninsula; "Books," Rs. 1,250 were due for the payment of certain bills of 1907; "Petty Repairs," Rs. 100 was spent on new cane matting; "Microscopic Lamps," Rs. 60, purchased for the Medical Section of the Society; "Safe repairing," Rs. 55. Under the heads of "Commission," "Printing Circulars, etc.," and "Paging of MSS." there is also slight increase. The sum of Rs. 55-4-9 has been paid for accrued interest on Rs. 8,000 Government Promissory Notes purchased during the year, and a sum of Rs. 31-13-9 was spent for sending notices to Members in connection with the Anniversary Celebration.

The following sums were held at the close of the year on account of the different funds administrated by the Society:—

			Rs.	A.	P.
Oriental Publication Fund	No. I	..	4,748	13	2
Ditto ditto	No. II	..	3,325	8	0
Ditto ditto	No. III	..	3,000	0	0
Sanskrit Manuscript Fund (less Rs. 1,000 advanced to the Officer in charge)		..	1,718	12	9
Arabic and Persian MSS. Fund		..	145	4	7
Bardic Chronicle MSS. Fund		..	2,400	0	0
	TOTAL	..	15,338	6	6

The Permanent Reserve Fund at the close of the year amounted to Rs. 1,55,700, and the Temporary Reserve Fund at

the close of the year was Rs. 41,600 against Rs. 1,53,950 and Rs. 35,350 respectively.

The Permanent Reserve Fund has increased by Rs. 1,750 from the entrance fees received during the year, and the Temporary Reserve Fund has increased by Rs. 6,250 from the Government paper purchased during the year. The Trust Fund at the close of the year was Rs. 1,400.

The Budget Estimate of Receipts and Disbursements for 1909 has been calculated at—

	Rs.
Receipts	24,834
Expenditure	24,770

The Budget Estimate of Receipts is Rs. 1,177 less than the Actuals and Rs. 2,004 more than the Estimate of 1908.

The Budget allotments for the year have been made as below. The Budget Estimate of Disbursements is Rs. 1,755 more than the Actuals of 1908, the items "Salaries," "Pension," "*Journal and Proceedings*" and "*Memoirs*" and "Library Catalogue" have all been increased. "Salaries" are higher owing to the appointment of an extra clerk and a duftry from July 1908, and a pension has been allowed to a clerk on retirement as already noticed. "*Journal and Proceedings*" and "*Memoirs*" are higher because certain printing charges of 1908 have not been paid yet.

The heavy increase on account of Library Catalogue is in anticipation of the printing bills for the sheets which are now passing through the Press. The items "Repairs" and "125th Anniversary Entertainment Fund" have been added to the Budget Estimate of 1909. "Repairs" include the complete whitewashing and decorating the interior of the building. The Anniversary Entertainment Fund is being raised by special donations from the Members. A sum of Rs. 500 has been guaranteed by the Council, should the necessity arise for extra expenditure in connection with the *Conversazione*. The other items are based upon the actuals of the last year.

The expenditure on the Royal Society's Catalogue (including subscriptions sent to the Central Bureau) has been Rs. 4,096-1-6, while the receipts under this head from subscriptions received on behalf of Central Bureau (including a grant of Rs. 1,000 from the Government of India) have been Rs. 8,803. A sum of Rs. 3,471-7-0 has been remitted to the Central Bureau, and the amount of Rs. 4,874-2-11 is still due.

Mr. J. A. Chapman proceeded on furlough in September 1908, when Mr. D. Hooper was appointed to the office of Treasurer.

BUDGET ESTIMATE FOR 1909.

Receipts.

	1908. Estimate.	1908. Actuals.	1909. Estimate.
	Rs.	Rs.	Rs.
Members' subscriptions ..	9,000	9,936	9,500
Subscriptions for the Society's *Journal and Proceedings* and *Memoirs* ..	1,460	1,560	1,560
Sale of publications ..	2,000	1,557	2,000
Interest on investments ..	6,670	6,765	6,770
Rent of room	600	550	650
Government allowances ..	3,000	3,000	3,000
Miscellaneous	100	83	100
Entrance fees ..	..	1,760	..
125th Anniversary Entertainment Fund ..	..	800	485
Ditto Balance carried forward from 1908 ..	..	..	769
TOTAL ..	22,830	26,011	24,834

Expenditure.

Salaries	5,200	5,435	5,680
Commission	500	539	525
Pension	240	360	455
Stationery	125	122	125
Light and Fans ..	320	272	275
Municipal Taxes ..	1,465	1,465	1,465
Postage	575	642	600
Freight	390	375	380
Contingencies	500	523	500
Books	2,000	3,241	1,200
Binding	1,000	1,042	1,000
Journal and Proceedings and *Memoirs*	7,600	7,506	7,500
Printing Circulars, etc. ..	300	344	300
Auditor's fee	100	100	100
Petty repairs	35	127	100
Insurance	200	187	190
Library Catalogue ..	1,500	..	1,700
Grain Compensation Allowances	200	268	300
Carried over. Total ..	22,250	22.548	22,395

		Rs.	Rs.	Rs.
Brought forward	..	22,250	22,548	22,395
Paging of manuscripts	..	200	206	..
Tibetan Catalogue	..	310	60	310
Microscopic lamps	..	..	60	..
Safe repairing ..	..	..	55	..
125th Anniversary Entertainment Fund	..	..	31	1,285
Interest on Government paper purchased	..	..	55	..
Repairs ..	..	..	..	780
TOTAL	..	22,760	23,015	24,770

Agencies.

Mr. Bernard Quaritch and Mr. Otto Harrassowitz continued as the Society's Agents in Europe.

The number of the copies of the *Journal and Proceedings* and the *Memoirs* sent to Mr. Quaritch, during the year 1908, was 642, valued at £87-6, and of the *Bibliotheca Indica* 354, valued at Rs. 330; of these copies to the value of £60-9-11 and Rs. 68-9 have been sold.

Sixteen invoices of books purchased and of publications of various Societies sent in exchange have been received during the year, the value of the books purchased amounting to £114-9-6.

The number of copies of the *Journal and Proceedings* and the *Memoirs* sent for sale to Mr. Harrassowitz, during 1908, was 212, valued at £33-6, and for the *Bibliotheca Indica* 518, valued at Rs. 486: the sale proceeds have been £17-19-2 and Rs. 246-13 respectively.

Library.

The total number of volumes and parts of magazines added to the Library during the year was 5,073, of which 458 were purchased and 4,615 were presented or received in exchange.

Part I of the Library Catalogue up to the letter E has been published, and the second part to end of the letter L is under revision and will be published shortly.

On the recommendation of the Finance Committee, the the Council ordered the discontinuance of the printing of the list of new books added to the Library. The list, however, will be prepared and type-written in the office, and Members can receive copies on application.

Mr. J. H. Elliott has continued as Assistant Secretary throughout the year.

Regional Bureau for the Royal Society's International Catalogue of Scientific Literature.

The Bureau was maintained during the year at a cost of :—

	Rs.	A.	P.
Staff	461	13	0
Postage, freight, etc. ..	111	8	9
Stationery, etc.	51	4	9
TOTAL ..	624	10	6

at the expense of the Government of India.

Two thousand one hundred and forty-seven index slips were prepared and sent to the Central Bureau, 227 volumes distributed, and subscriptions to the amount of £230-8-5 collected and remitted to London. A nearly equal sum is ready to be remitted to London as soon as Exchange is favourable.

The slips were prepared, in chief part, by the Bureau's clerk, and checked or corrected by one or other of the following gentlemen, most of them members of the Society, who have given freely their services :—

Dr. N. Annandale.
I. H. Burkill, Esq.
Prof. J. A. Cunningham.
Rev. Fr. E. Francotte, S.J.
Capt. A. T. Gage, I.M.S.
D. Hooper, Esq.
Capt. R. E. Lloyd, I.M.S.
Capt. J. W. D. Megaw, I.M.S.
C. Little, Esq.
H. Maxwell-Lefroy, Esq.
B. B. Osmaston, Esq.
Capt. W. S. Patton, I.M.S.
C. W. Peake, Esq.
Major L. Rogers, I.M.S.
E. Thurston, Esq.
G. H. Tipper, Esq.
E Vredenburg, Esq.
Major Wall, I.M.S.

The output of the Bureau has increased : at the same time much has been done in adopting devices for saving labour, and in regularising the keeping of the accounts and other records, that proceedings may be simple in future.

Elliott Prize for Scientific Research.

On the recommendation of the Trustees for the Elliott Prize for Scientific Research, the Elliott Gold Medal for the year 1907, together with Rs. 109-7-8 in cash, was awarded to Babu Akshaya Kumar Mazumdar of Mymensing, for his essay on Composition of Colours.

The subject selected for the Elliott Gold Medal for the year 1908 was "Physical Science," and no essays have been received in competition.

Barclay Memorial Medal.

In order to award the Barclay Memorial Medal for 1909, the following members were appointed to form a "Special Committee" to record their recommendations for the consideration of the Council: Mr. I. H. Burkill, Capt. A. T. Gage, I.M.S., Capt. R. E. Lloyd, I.M.S., Lt.-Col. F. J. Drury, I.M.S., and Mr. E. Vredenburg.

Society's Premises and Property.

The interior of the Society's rooms has been white-washed and decorated, and the cane matting has been partially repaired.

The question of building new premises for the Society on its own ground is still under consideration by the Council.

Exchange of Publications.

During 1908, the Council accepted six applications for exchange of publications, *viz*:—(1) From the University of Pennsylvania in the section of Ethnology, Philadelphia: the Society's *Journal and Proceedings* and the Ethnological papers from the *Memoirs* for their Transactions. (2) From the Director of *La Revue des Études Ethnographiques et Sociologiques*, Paris: the Society's *Journal and Proceedings* and the Ethnographical Papers from the *Memoirs* for his magazine. (3) From the R. Accademia della Scienze dell' Istituto di Bologna: the Society's *Journal and Proceedings* and *Memoirs* for the publications of the Academy. (4) From the Bangiya Sahitya Parishad, Calcutta: the Society's *Journal and Proceedings* and *Memoirs* for the publications of the Institute. (5) From the Dominion Museum, Wellington: the Society's *Memoirs* containing Ethnographical papers for the publications of the Museum. (6) From the Italian Association for the Advancement of Sciences, Rome: the Society's *Journal and Proceedings* and the Scientific papers from the *Memoirs* for their Transactions.

At the instance of the Hon'ble Mr. E. A. Gait, the Council agreed to exchange the Society's *Journal and Proceedings* and Literary papers from the *Memoirs* for the publications of the Société des Bollandists, Brussells, and the Hon'ble Mr. Gait has been informed accordingly.

Publications.

There were published during the year twelve numbers of the *Journals and Proceedings* (Vol. IV, Nos. 1—9, Extra No. 1908, and Vol. LXXIV, Parts 2 and 3) containing 1084 pages and 16 plates.

Of *Memoirs*, two numbers were published (Vol. II, Nos. 6 and 7) containing 34 pages.

The Numismatic Supplement, No. 9, has been published in the *Journal and Proceedings*, Vol. IV, No. 8, under the editorship of Mr. H. Nelson Wright.

There were also published Part I of the Society's Library Catalogue, List of Arabic and Persian MSS. acquired on behalf of the Government of India during 1903—1907, and the Index to the *Journal and Proceedings*, Vol. III.

Lt.-Col. D. C. Phillott continued as General Secretary and edited the *Proceedings* until April when he left India and Mr. T. H. D. LaTouche was appointed. Mr. LaTouche carried on the duties till September when Mr. G. H. Tipper succeeded him. Lt.-Col. Phillott also continued to be Philological Secretary and edited the Philological Section of the *Journal* until April when Dr. E. D. Ross took charge of the office. The Natural History Section of the *Journal* was edited by Mr. I. H. Burkill, the Natural History Secretary, and the Anthropological Section of the *Journal* by Dr. N. Annandale, the Anthropological Secretary. Mahamahopadhaya Satis Chandra Vidyabhusana carried on the duties of Joint Philological Secretary, while Mahamahopadhaya Haraprasad Shastri continued the work of collecting Sanskrit Manuscripts throughout the year. Lt.-Col. Phillott was also in charge of the Search for Arabic and Persian Manuscripts until April when Dr. Ross resumed charge of the Search. Major L. Rogers continued as Medical Secretary throughout the year. The Coin Cabinet was in charge of Mr. H. Nelson Wright who also reported on all Treasure Trove coins sent to the Society.

Philology.

Mr. Harinath De edited for our *Memoirs* the Persian text of a very interesting history of Dacca, designated as the Tārīkh-i-Nuṣratjangī by Nawab Nusrat Jang of Dacca, who began its compilation apparently some time before 1817, but unfortunately left it incomplete as death overtook him in 1822. After his death it was continued and brought down to 1843 by the son of his 'Arẓbegī, Hamid Mir, properly called Sayyid Abdul Ghani. The Editor concludes his preface with a promise to give a translation of this booklet with historical notes in due course.

An interesting article by M. K. Shirazi was published in the *Journal* for January 1908, under the title of "Note on a Persian Charm." It deals with a tradition handed down from the Imams that whoever looks at the diagram (given on p. 12) after each of the five daily prayers, will be protected from all evils.

In a short historical note on the "Qadam Rasul Building at Balasore," Maulvi Abdus Salam, M.A., gives a summary

account of the sacred building, with short notices of some past rulers of the Province; and reproduces the inscription which exists on a slab affixed to the Mausoleum of Sayyid Habibullah Khan within the Qadam Rasul Building.

Mr. H. Beveridge in an article on the "Babar-Namah fragments" assert that these fragments, which are not found in the popular original text, and which record the death of Babar, were originally written by Babar's great-grandson, Jahāngīr.

Another learned article by Mr. H. Beveridge was published in the *Journal* for May 1908, under the title of "The Date of the Salimi coins." In this article he controverts the theory propounded by Rev. Taylor in connection with the Salimi coins that they were not issued during the reign of Akbar, as Jahāngīr never was Governor of Gujerat, and as his rebellion did not extend to Ahmedabad. Mr. H. Beveridge after giving various reasons in support of his objections inclines to the view of the British Museum Catalogue that the Salimi coins were issued during Akbar's lifetime.

In the *Journal* for February a "Hindustani and English Vocabulary of Indian Birds" was published by Lt.-Col. D. C. Phillott and Pundit Gobin Lal Bonnerjee, Board of Examiners; this vocabulary has been compiled almost entirely from Surg.-Major T. C. Jerdon's "Birds of India," and his spelling has been retained, except in the cases of those words that have been met with by the compilers in the course of reading.

Lt.-Col. D. C. Phillott in his learned article, published in the *Journal* for March 1908 and entitled "Translation of a letter by Abul Fazl," truly remarks that these letters, which were once considered the acme of style, are turgid, bombastic, prolix, and frequently puerile. "His Insha Pardazi," it is suggested, "exhibits examples of almost every vice enumerated in English Text-books on Rhetoric. Everywhere sense is sacrificed to sound; improprieties, solecisms, and barbarities abound; the thought and the metaphors are confused or strained; while the meaning of the intricate complex sentences is obscure."

"Certain disputed or doubtful events in the History of Bengal, Muhammadan Period," Part I, by Manmohan Chakravarti, M.A., B.L., M.R.A.S., published in the *Journal* for April 1908. It is asserted in this article that a large number of facts and events in the Pre-Moghul Period of Bengal History still remain doubtful or unsettled. A few of them have been selected by the writer for discussion, in the hope of drawing attention to them prominently. "Their importance," the writer adds, "is undoubted, and their solution will help in giving a clearer idea of the period."

In a short note entitled "Fresh Light on the word *Scarlet*" Dr. E. D. Ross points out that the word Scarlet, which now only means a colour, and for a long time in Europe meant a broad-

cloth, probably originally stood for a fine silk. He quotes an example of this word in the form of *Sakala* being used as a foreign word in China for a silk-brocade.

Professor H. C. Norman contributes to the *Journal* three useful papers from Pali sources, *viz.*, "Gandhakuṭi—the Buddha's private abode," "Simhalese documents and the Maurya inscription," and "The Seven Sahajātā of the Buddha." The first paper gives a clear and authentic account of Buddha's habits as a private individual; the second shows that the Siṁhalese records harmonise with the conclusion that the Sarnath inscription was an edict framed to prevent entrance into the Buddhist order of unprivileged persons who raise schisms in it; and the third is a note on the seven individuals that came into existence at the very time when the Bodhisttva was born in the Lumbinī grove. Dr. Satis Chandra Vidyā-bhūṣaṇa's researches into the Tibetan language have produced two papers, *viz.*, "Two Tibetan Charms obtained by Lt.-Col. Stuart H. Godfrey in Ladakh, one for chasing away evil spirits and the other for compelling fortune," and "A descriptive list of works on the Mādhyamika philosophy." The first paper illustrates the beliefs and superstitions of the Tibetan people on the Kāśmīra frontier while the second notices 27 rare works on the Mādhyamika philosophy recovered from Tibet.

Mahāmahopādhyāya Hara Prasād Śāstri in his paper on "A copper-plate inscription" controverts the reading of a dedicatory inscription in Kharoṣṭi character recovered from Taxila by the late Sir Alexander Cunningham. Babu Rakhal Das Banerji's "Notes on Indo-Scythian Coinage" based on Mr. Vincent A. Smith's "Catalogue of the Coins in the Indian Museum" is a review of the numismatic history of the Punjab during the first four centuries of the Christian era. Several inscriptions of the Pāla dynasty noticed by late Dr. Rajendra Lal Mitra and Sir Alexander Cunningham remained deposited in the Indian Museum. Babu Nilmani Chakravarti critically re-edits them in an article called "Pāla inscriptions in the Indian Museum." Mr. A. Venis's "Buddhist inscription from Hasra Kol, Gayā," which on palæographic grounds may be assigned to the 12th Century A.D., is a dhāraṇī or magic litany for the protection of a building. Babu Monmohan Chakravarti in his "Notes on the geography of old Bengal" traces the territorial limits of Puṇḍravardhana, Gauḍa, etc., through the various periods of Indian history. In the paper on "Certain unpublished drawings of antiquities in Orissa and Northern Circars," the same writer gives a descriptive account of several folios of drawings deposited in the library of the Asiatic Society of Bengal by late Col. Mackenzie in 1822.

Pandit Yoges Chandra Śāstri's "Lakṣmī-pūjā" is an interesting contribution to the popular religion of the Hindus all over India. Pandit Kunja Bihari Nyāyabhūṣaṇa in his "List

of Jaina Manuscripts" gives an alphabetical list of 1355 manuscripts incorporated in the collection of the Asiatic Society of Bengal. Pandit Vanamali Vedāntatirtha in his "Bhāsā-paricheda" attempts to prove that that work was a mere compilation from the writings of previous authors. Professor Sarada Ranjan Ray in his paper on "The age of Kālidāsa" supports the tradition that the poet Kālidāsa flourished at the court of Vikramāditya in the 1st Century B.C.

Mathematics and the Natural Sciences.

In 1907 the Society published a paper by Mr. G. R. Kaye in which he stated that we are not yet justified in saying that our modern numerical notation is of Indian origin. In 1908 Mr. Kaye sent to the Society two papers: the first of these, published in the Journal for March, is on Aryabhata — the famous Indian Astronomer of the fifth century. Mr. Kaye gives a translation of, and a commentary on, his "Ganita" and thinks that it was intended to be supplementary to such mathematical ideas as were then current among Indian Scholars, and that the selection of its rules was determined by available works—almost certainly books of the later Alexandrine School. He concludes that while there is no evidence which says that the Ganita had not an ultimate Egyptian origin, there are many points which support such a hypothesis.

Mr. Kaye's second paper is a short one pointing out that the Abacus was not necessarily in common use in ancient times in India: there is no real evidence for the frequent statements that it was.

Professor Syama Das Mukhopadyaya, in the April Journal, set forward *A general theory of Osculating Conics*, and in the September Journal followed it up with a second paper on the subject. In the August Journal is printed his *Geometrical theory of a plane non-cyclic arc finite as well as infinitesimal.*

Babu Mahendra Nath De contributed to the April Journal a paper entitled *On some reciprocal relations of Curves and Surfaces*, and to the July Journal one *On rationalisation of Algebraical Equations.*

Mr. Little's paper in the February Journal *On the calm region in the atmosphere above Calcutta which, during the cold season, is at a height of* 3,000 *feet*, is one of great interest. The author records the results of making observations on the direction—vertical and horizontal—taken by balloons freed in Calcutta: it is patent from them that at 4,000 feet there exists a very different wind from that at the earth's surface—and the Calcutta north-westers come up in the upper wind. Between the two winds is the calm region. There is often cloud to its lower limit.

Professor Brühl in the September Journal has advocated

special standard temperatures for tropical countries, and a Committee has been appointed to collect evidence and to discuss the question as regards India.

Mr. Hooper has given in the February Journal two notes, one on the nature of the *Fat of the Himalayan Bear*, and the other on that of the *Oil of Lawsonia alba*—the Henna bush. Professor Panchanan Neogi has shown in the June Journal under what conditions Fehling's Solution may be reduced by means of formaldehyde and a mirror-like film of copper deposited on the inside of a glass vessel : while Professor P. C. Ray in the August Journal has published a note *On the retardation and acceleration in the dissolution of mercury in nitric acid in the presence of minute traces of ferric nitrate and manganous nitrate.* A second part of Professor Watson's report *On the Fastness of Indigenous Dyes* has appeared as a memoir. Professor Watson shows that several Indian dyes, which on cotton are of second-rate value, behave in a much better way on silk.

Captain Hirst's paper in the September Journal *On the Kosi river and some lessons to be learnt from it* is of great present interest. Captain Hirst points out that in very recent times some of the feeders of the Kosi were independent rivers, so that the Kosi then could not have had its present volume However, in the last 150 years, over which there is a good record, the river has moved very little, and it seems unlikely that it will move either east or west appreciably of its present position unless it is interfered with by embankment, and unless there occur geological subsidences or elevations for which we know no rules at present. He indicates what surveying is necessary for a fuller knowledge of this river and its ways. Babu Hem Chandra Das Gupta in the June number published *Geological notes on Hill Tipperah.*

Lieutenant-Colonel Phillott contributed to the May Journal a note *On the Peregrine Falcon*, giving chiefly those points and habits of the bird which appeal to the hawker. This paper falls into a series with several others from his pen.

In the June Journal will be found *A diagnosis of a living species of the genus Diplonema* by Dr. Annandale. Diplonema is a genus of flies otherwise fossil.

In the Proceedings for June may be found the late Rai Bahadur Ram Brahma Sanyal's plea for the establishment of an Aquarium on the coast of Bengal—a plea which the Society has supported. And also in the proceedings are given accounts of interesting Zoological exhibits made by Dr. Annandale, Mr. Bentham, Capt. Stewart, Capt. Lloyd and Mr. Chaudhuri.

The Society during the year has published as parts 2 and 3 of volume lxxiv of the Journal (old series) a continuation of the *Materials for a Flora of the Malayan Peninsula* by Sir George King and Mr. Gamble. The undertaking to publish this

important work will be completed by volume lxxv of the Journal, old series.

Lieutenant-Colonel Prain and Mr. Burkill have given diagnoses in the September Journal of seventeen new species of Dioscorea.

Mr. Martin Leake's paper in the January Journal on *Experimental Breeding of the Indian Cottons* is of great interest. It proves that in the United Provinces crossing of species and races of cottons grown together occurs freely, and indicates that the results follow mendelian rules.

Lastly, two papers by Mr. Burkill on Flower Fertilisation must be mentioned. They were published in the April Journal. The first classifies the autumn flora of the ridge between the Darjeeling district and Nepal, showing that pendulous flowers are very numerous and suggesting that in that wet climate it is of special advantage to plants to protect their honey and pollen from the rain: the second similarly classifies the spring flora of the hills near Simla, shows how European in character it is, and gives information regarding the behaviour of insects on the flowers. It is suggested that the summer and autumn floras of Simla should be analysed in a similar way in order to see if the advent of the rains brings in an increase in the proportion of flowers which by being pendulous protect their honey and pollen from getting wet. It is also suggested that the curious habit of one of the Bumble bees of biting corollas on the left side is brought about by the way in which certain of the hill flowers, *e.g.*, *Impatiens* and *Pedicularis*, are constantly oblique.

Medical Section of the Asiatic Society of Bengal.

Meetings of this section have been held regularly throughout the year, the attendance has been well maintained, and the various papers keenly discussed. Specially noteworthy have been the debates on epidemic dropsy and tubercular diseases in Bengal, at each of which several papers by different authors were read, and much important information recorded. Other subjects of interest have been the differentiation of the typhoid group of bacilli, the value of X-rays in surgery and medicine, puerperal eclampsia among Bengalis, and the prevalence of gallstones in the tropics. In addition numerous important and rare cases have been shown. Lantern slides have been used to illustrate several of the papers. The burning question of the rapid increase of unauthorised and self-constituted bodies conferring diplomas and certificates, some of them colourable imitations of the Calcutta University degrees in medicine, has been discussed, and a resolution calling the attention of the Government of India to this abuse forwarded.

The first step towards the founding of a reference medical library has been taken by means of an arrangement whereby all the important journals received in exchange for the *Indian Medical Gazette* (in which the medical papers of the Society are published) are obtained, which in time will form a valuable series. The great need at present is some leading medical works of reference, but owing to shortness of funds no progress in this direction has yet been possible, although large amounts have been expended on books required for other sections. A number of medical men have joined the Society during the last year, and this section may now be considered to have been placed on a firm basis, and should continue to add strength to the Society. The success of the sectional meetings has also encouraged the Council to consider the possibility of further progress in this direction.

Anthropology, etc.

The most important anthropological paper published during the year, indeed practically the only one if philology be omitted, is the Rev. A. W. Young's account of the Jews' Harp in Assam—a paper which contains much information of a comparative nature.

Another interesting note by Lt.-Col. D. C. Phillott "On the Drum in Falconry" was published in the *Journal* for April 1908. In this article he attempts to determine the precise views of the Drum in Falconry; and in order to prove his statements he translates some extracts from Persian MSS. and Urdu printed works on the subject.

The same gentleman in his article on "Eastern Hoods for Hawks," published in the preceding number of the *Journal*. explains that more than one pattern Hawk-hood is used in India.

In accordance with the recommendation of Sir Andrew Fraser (*vide* Annual Report for 1907, p. xvi) a distinguished Sanskrit scholar of Calcutta has recently been appointed by the Government of Bengal in connection with the Society, to supply information to inquirers regarding the history, religion, customs and folk-lore of Bengal. As his work seems likely to be of importance to students of philology rather than anthropology, it has been arranged that it shall have no connection with that of the Anthropological Secretary.

Coins.

During the year 3 gold, 28 silver and 9 copper coins were presented to the Society's cabinet chiefly as a result of distribution of treasure trove under the order of local Governments.

The coins were of the following periods :—

Mughal (*i.e.*, between A.D. 1556—1858)	..	16
Sulṭāns of Delhi (Sikandar Lodi)	..	2
Jaunpur	..	1
South Indian	..	7
Assamese	..	9
Burmese	..	1
Malaya Varmmā of Kalingar ..	..	1
Saurāshtra	..	2
Modern Turkey	..	1
		40

None of the coins present any features of exceptional interest.

The Numismatic Secretary examined and reported on 171 gold, 521 silver, and 2,895 copper coins during 1908, or a total of 3,587.

Two finds were of special interest. One of these from the Hoshangabad District in the Central Provinces comprised 2,850 copper coins of the Mālwā dynasty, among which were two coins of Bahādur Shāh of Gujarāt of the Square Mālwā type, hitherto unpublished, and eight of Qādir Shāh, of which Sulṭān no coins had previously come to light. The other, from the Jubbulpore District of the Central Provinces, consisted of 146 gold and 36 silver coins, representing the series known as the Sulṭāns of Delhi and their contemporaries. Fuller notices of these will be found in the Numismatic Supplement of the Society's *Journal*.

Bibliotheca Indica.

Of the 20 fasciculi of texts of different dimensions published in the *Bibliotheca Indica Series* during the year under review, 13 belong to Brahmanic Sanskrit, 1 to Buddhist Sanskrit, 1 to Jaina Sanskrit, 1 to Jaina Prakrit, 1 to Tibetan, and the remaining 3 to Persian literature. The fasciculi include Mr. Beveridge's translation of the *Akbarnama*, Vol. II, fasc. V, and Pandit Ganga Nath Jhan's List of Contents of the *Slokavārtika* in English. Of the new works sanctioned last year, 6 fasciculi have been published this year, *viz.* :—

(1) One fasciculus (200 pages) of *Rasārṇava*, an important Sanskrit medical work, edited with critical notes by Dr. P. C. Ray and Pandit Haris Chandra Kaviratna.

(2) One fasciculus (96 pages) of *Samaraiccakahā*, the well-known Jaina Prakrit work of Hari Bhadra Sūri, edited by Dr. Hermann Jacobi.

(3) One fasciculus (273 pages) of *Sragdharāstotra*, a Buddhist Sanskit Tāntric work of Kāśmīra in the

8th Century A.D., edited by Dr. Satis Chandra Vidyabhusana. It consists of the Sanskrit text by Sarvajña-mitra with the Sanskrit commentary of Jina-raksita and two Tibetan versions, together with an English translation of the text, an elaborate introduction and a copious index of Sanskrit and Tibetan terms.

(4) One fasciculus (96 pages) of *Nyāyabindu*, a Buddhist work on Logic, edited by Prof. Louis de la Vallee Poussin. It consists of Tibetan version of the text of Dharmakīrti and the commentary of Vinīta Deva.

(5) One fasciculus (433 pages) of *Baz-nama*, an important Persian work, edited, with introduction and notes, by Lt.-Col. D. C. Phillott.

(6) One fasciculus of a History of Gujarat in Persian by Mir Abū Turābvalī about 1574 A.D., edited with introduction and notes by Dr. E. D. Ross.

At the suggestion of Prof. A. Macdonell of Oxford, the Council of the Society have decided to publish henceforth the texts in the *Bibliotheca Indica Series* in complete volumes instead of in fasciculi of 96 pages. The supervision of the *Bibliotheca Indica* publications was in the hands of Mahāmahopādhyāya Dr. Satis Chandra Vidyābhūṣaṇa, Joint Philological Secretary of the Society.

Report on the Search for Sanskrit MSS.

Travelling Pundit Rākhālchandra Kāvyatīrtha worked in the interior of the Bankura district, collected about 40 notices, and died in the month of October. Babu Nanigopāl Banarjee has succeeded him in that post. Pandit Rākhālchandra Kavyatirtha worked with energy and enthusiasm for over 18 years and collected a large number of MSS. from obscure villages in Bengal, Behar, and Chhotanagpur. His death removes one of the most valuable assistants in the field of the search of MSS.

Pundit Ashutosh Tarkatīrtha travelled in various villlages in Burdwan, Hugli, Midnapur, 24-Pargannas and Bankura. He is preparing an exhaustive list of all the MSS. in private collections, describing only those that are not known.

Mahamahopadhyaya Haraprasad Shastri visited Benares on three occasions. Altogether 280 MSS. have been collected, of which the most important is *Bhṛgu-Samhitā*, an extremely rare astrological work. The MS. contains 10 parts and runs through 38,000 ślokas. A portion of *Garga-Samhitā* has also been acquired. Two MSS. of *Vriddha-yābana-jālāka* have been acquired, one with the Hindi commentary by Mahādesh. A complete copy of *Bākyapadīya* has also been acquired. It

was with great difficulty and search that a copy of *Chatūrvün-śatimatam*, a smriti work often quoted, has been acquired.

Śavara's *Mīmaṁsa-Bhāṣya* was commented upon by Kumarila in śloka and also in prose. The śloka portion extends to the first Pada of the first chapter. Viśveśvara Bhaṭṭa, nicknamed Gāgh Bhaṭṭa on account of his bellowing voice, continued the śloka commentary to the end of the work and entitled it *Sivārkodaya*, a MS. of which has been acquired in the year under review.

Several Purāṇas, known only in quotations, have been acquired, namely, *Vahni Parāṇa*, *Ausanasa Purāna*, *Adipurāṇa*, *Aditya Purāṇa*, *Vasiṣṭha Purāṇa* and *Parānanda Purāṇa*. *Yogi Yājnyavalkya*, which is to be distinguished from *Yājnyavalkya-Samhitā*, a smriti work, has been acquired. A MS. of Syenika Śastra, on hawking, has been acquired with another containing a commentary on it. A Sanskrit poem on the glorification of the family in which Muhummad was born, entitled *Kureśa Vijoya Kavya*, has been acquired.

Many of the Nepalese MSS. described in the last year's report and ordered for copying were received.

The number of MSS. collected up to the 31st December, 1908, is 8,328. About 200 MSS. are under examination for purchase.

Arabic and Persian Search Fund.

During the year under review a hand-list of the Arabic and Persian MSS., acquired for the Society during the past five years, has been prepared by Maulavi Hidāyat Ḥusayn and issued. We have to regret that the services of this gentleman, owing to his appointment as Assistant Professor at the Presidency College, have been lost to the Search Fund, for which he has done such excellent work.

We have much pleasure in announcing that the Government of India have been graciously pleased to make a further grant of Rs. 5,000 per annum for five years for the continuation of the search for and cataloguing of Arabic and Persian MSS.

Search for Bardic Chronicles.

It was satisfactory to note in the report for last year, that some progress had been made in the Search for Bardic Chronicles. During the year Major Baldock resigned his office and Mahamahopadhya Sudhakara Dvivedi of the Benares Sanskrit College was appointed to supervise and direct this Collection of MSS. No further progress has been reported.

The Report having been read and some copies having been distributed, the Hon. Mr. Justice Asutosh Mukhopadhyaya, President of the Society, delivered an address.

Annual Address, 1908.

GENTLEMEN,

It has been customary for your President, during many years past, to address the society once at least during the term of his office. It has been, however, my special privilege to address you twice in the course of the last three years, once as senior Vice-President during the temporary absence of my distinguished predecessor in this chair, and another time at the end of the first year of my term of office as President. The observations, which I submitted to the society on these two occasions, were so kindly received that I am reluctant, in spite of considerable pressure of other work, to allow the present opportunity to pass without some observations on the past work and the future prospects of the society, and I earnestly trust that my remarks will be received in the same indulgent spirit as on previous occasions.

The first circumstance, to which our attention is necessarily directed on an occasion like this, is the numerical strength of the society. For, unlike other civilised countries, we have here to maintain ourselves almost entirely out of our own resources without any subvention from the imperial or local government, except for purposes of special work. The financial prosperity of the society is, therefore, necessarily a matter of the deepest concern to all of us. It is a matter for congratulation that during the last 12 months there has been a considerable acquisition to our strength, and the number of members on our rolls now exceeds by over 100 the number as it stood five years ago. For this substantial addition to our strength, we have to be grateful mainly to the medical profession from whom our recent members have been in a large measure recruited, and I trust that this will prove to be a source of constant supply of strength, if we find ourselves in a position, as we hope we may, to provide an adequate medical library for reference and research. But, although the numerical strength of the society has been not merely fairly maintained, but perceptibly improved, we have to lament the loss from our ranks of more than one distinguished worker. Sir Richard Strachy, who passed away last year, full of years and honours, had been one of our honorary members since 1895, but long before that, in the earlier years of his career, he had contributed to our Journal and Proceedings, valuable papers on the zoology of the Himalayas. The death of Professor Keilhorn has removed from the roll of our honorary members the name of a Sanskritist of world-wide reputation, who had, during his stay in India, rendered signal service to the

promotion of Sanskrit studies in the Western Presidency, and after his retirement had communicated to our Journal valuable papers on inscriptions of historical importance. The venerable figure of the Reverend Father Eugene Láfont will long be remembered by many of us who had the privilege to listen with pleasure and profit to his brilliant exposition of recent scientific discoveries in this hall. We have further to deplore the loss of Rai Bahadur Ram Brahmo Sanyal, who was a devoted student of Indian Zoology, and whose services to the Zoological Gardens will long be remembered with gratitude. He had, from time to time, communicated to us interesting zoological notes, and it was only recently, in the course of the last few months, that the society supported with pleasure his proposal for the establishment of an aquarium on the coast of Bengal.

The internal administration of the society during the last 12 months has been carried on with caution and success, for which we have to be thankful mainly to our treasurers, Mr. Chapman and Mr. Hooper. Our building, which is now fully a century old, has been as usual a source of anxiety and expense, and the time has come when we must seriously take into consideration the feasibility of an entirely new structure. The land on which the building stands, and which we received as a gift from the Government of India, is an asset of considerable value, and Mr. Burkill has demonstrated that, if this valuable asset be utilized, as it may well be from a commerical point of view, we may erect on it a magnificent building, which will give us more comfortable accommodation and will, at the same time, prove a source of substantial income. Considerable progress has been made with the development of this scheme, and we trust our proposals may assume practical shape in the course of the current year. I make no secret of my personal opinion that the position has to be boldly faced, and, unless we do so without delay, we shall discover later on that we have spent year after year, in the maintenance of an old building, sums which might have been more profitably spent for the legitimate purposes of the society. As regards our library, which is another asset of considerable value, the extent of which is realised by few of our members and probably by none in the outside world, it is a matter for congratulation that the long projected catalogue is nearing completion. The first part of it has already been placed in the hands of our members, and it is earnestly hoped that before the end of this year all our members and scholars outside our body may be furnished with a complete and trustworthy guide to our invaluable collection.

I would now turn for a moment to the work (literary and scientific) which has been done by our members during the past 12 months. Our recent publications may perhaps be open to the criticism that they do not show an abundance of first-rate original production, but I think that even the most captious

critic will not be inclined to question that they indicate a considerable amount of research and investigation. In the field of Philology, Mr. Harinath De has published the original of an extremely interesting history of Dacca, the former capital of Bengal, and I venture to express the hope that the unique linguistic attainments of the distinguished editor will be more frequently placed at our disposal for the elucidation of many an obscure point in Indian history, which still awaits solution. Another valuable contribution in the field of Philology came from one of our Ex-Presidents, Mr. Henry Beveridge, who has, I think. shown upon evidence of considerable weight and value that the view of Dr. Taylor that the Salimi coins were not issued during the reign of Akbar cannot be successfully maintained. Babu Mon Mohon Chuckerburtty, who has assiduously set himself to the investigation of disputed and doubtful events which happened during the Mahomedan period of the history of Bengal, has given us two important papers, but till the series is completed, it would be hardly right to criticise his views. The same writer has given us valuable notes on the ancient geography of Bengal and has traced the variations of territorial limits through the various periods of Bengal history. He has also described for us a series of valuable drawings of antiquities in Orissa which were deposited in our library by Col. Mackenzie so far back as 1822. It would be a mistake to suppose, however, that the interest of all our members who are experts in one or other department of Indian Philology or Antiquity has been absorbed in the solution of problems in the Mahomedan period of Indian history. The history of the great founder of Buddhism and of Buddhistic philosophy has claimed a fair share of the attention of well-known scholars. Professor Norman has placed at our disposal from Pali sources valuable information as to the life and teachings of Buddha. One of his papers gives us what we are assured is an authentic account of Buddha's habits as a private individual—information which must be of as much interest to the devotees of that religion as the details of the life and teachings of Christ and Mahomet are to the followers of Christianity and Islam. Another paper of Professor Norman seeks to confirm the view taken by well-known scholars of the scope and purpose of the inscriptions of Saranath, namely, that it was an edict framed to prevent entrance into the Buddhist order of unprivileged persons whose presence would be destructive of harmony. Dr. Satis Chandra Vidyabhusan has steadily prosecuted his researches into Tibetan sources, which have, in recent years, thrown a flood of light upon the true meaning of Buddhistic philosophy and its influence upon Indian Logic and Metaphysics; and his latest paper gives us some idea of the remarkable contents of a number of works recovered from Tibet and dealing with Madhyamic Philosophy, an extremely recondite system of Indian thought, our know-

ledge of which has hitherto been of a somewhat restricted character, derived mainly from the Sarvadarsan Sangraha of Madhabacharyya and the Madhyamikabritti. Professor Saradaranjan Roy has, in an interesting paper on The Age of Kalidas, re-investigated this interesting problem, and the force of his arguments has to my mind a distinct tendency to make the pendulum oscillate back to the ancient tradition that this illustrious Sanskrit poet adorned the court of that cultured prince Vikramaditya, who flourished in the first century before the Christian era. There have been also valuable papers in the domain of coins and inscriptions. A large mass of information, which must be treated as of abiding value and interest, has been placed at the disposal of the investigators by the publication of successive volumes of the catalogue of coins in the Indian Museum, which collection, as is well known, includes the coins placed at the disposal of the Trustees by our society. Of these, the volume by Mr. Vincent Smith throws new light on Indo-Scythian coins. The subject has now been taken up by one of our young enthusiastic workers, Babu Rakhal Das Banerjee, who has arranged the coins chronologically with numerous valuable observations, and has thus furnished a review of the Numismatic history of the Punjab during the first four centuries of the Christian era. Babu Nilmoni Chakraburtty has re-edited, with critical notes, the Pal inscriptions in the Indian Museum which were originally discovered and commented on many years ago by Dr. Rajendra Lal Mitra and Sir Alexander Cunningham. In the same direction, Mahamahopadhyaya Hara Prosad Sastri has contributed what must be regarded as a paper on a controversial subject, namely, the true reading and translation of the Khorosti copperplate inscription from Taxila; and I trust that scholars, competent to express an opinion upon this obscure topic, will examine the relative value and merit of the reading suggested by Sir Alexander Cunningham with the conflicting view now put forward. From this brief outline of the philological and antiquarian researches which have occupied the attention of many of our investigators during the last 12 years, it will be obvious that, although we are not in a position to annnounce any startling discoveries in the domain of philology, history, and archæology, yet it cannot be questioned that the work of our members is of a substantial character and will facilitate a fuller and deeper understanding of many an old problem. Some of these researches are based upon new materials and throw considerable light upon problems of absorbing interest, the bearing of which has hitherto been imperfectly appreciated. There are others, again, who have criticised, and, in some instances, succesfully demolished views previously held, and have brought out in their true perspective the aspect of some familiar old problems in the light of the latest discoveries. I must now pass on to researches in the domain of the pure and

applied sciences; but before I do so, I ought not to pass over in silence a paper of considerable interest and value which has not yet been published—I mean the journals of Major James Rennell kept during the years 1764—1767, and edited with minute care and attention by our enthusiastic Secretary Mr. LaTouche. This paper has not yet been published, but I have seen enough of it to justify the statement without any exaggeration that it is one of exceptional value and absorbing interest; and I feel no doubt that upon the publication of the journal of the pioneer of Indian Surveys, we shall have placed at our disposal materials for the solution of many a controverted point in the topography of these provinces. Another paper of considerable extent, which is now in the press, and which I trust may be published in the course of this year, gives the text of an important and hitherto unpublished work on Hindu Jurisprudence by the founder of the Bengal School of Hindu Law. I am not without hopes that this work may give to jurists as well as to antiquarians a vivid account of the Hindu Judicial System and Procedure as it existed in the 10th century of the Christian era.

In the domain of the pure and applied sciences, we have had a considerable number of papers of value and interest. Mr. Kaye has continued his researches in the history of Indian Mathematics. In one of the papers contributed by him he gives us the text with an annotated English translation of the Ganita of the great Indian Mathematician Aryyavatta whose name was hitherto familiar to scholars mainly through references in the long lost Pancha Siddhantica of Varahamihir, which was first recovered by Dr. Thibaut and published with an English translation by him in collaboration with our new associate member, Mahamahopadhyaya Sudhakar Dvivedi. Valuable papers on Pure Mathematics have been contributed by two of our younger investigators Professor Shyamadas Mukherji and Professor Mahendranath De, in which they develop and extend the theories first announced in a series of papers, which I had the honour to contribute to the Journal of the society more than 20 years ago. Professor Little gave us an extremely interesting paper on the calm region in the atmosphere of Calcutta, in which he has established that at a height of about three-fourths of a mile, there exists a very different air-current from what we find at the surface of the earth. We had also important contributions from Dr. P. C. Roy and Professor Panchanon Neogy on the subject of Chemistry, which furnish some indication of the high level of original investigation now carried on in the laboratory of the Presidency College. In the same field Professor Watson has continued his researches on the subject of the fastness of indigenous dyes, to which I referred in my address last year. He has established, upon solid evidence, that dyes which are of inferior value, behave in a much better way on silk than on

cotton, a fact which must be recognised as of great practical importance in the development of the industries of this country. In the domain of the Natural Sciences, we have had important papers in Geology as well as Zoology from Capt. Hirst, Mr. Hooper, and Dr. Annandale. Captain Hirst deals with a subject of great practical interest which had been previously attacked by Mr. Shillingford, *viz.*, the Kosi River, the erratic course of which has been a source of great danger to the people of the districts of Bhagalpur and Purneah. The conclusion at which he has arrived is rather disquieting, that the time for the rigid training of the Kosi is at a considerable distance ahead of us. The question is by no means free from difficulty, and we can only trust that, although it is sure to engage the attention of experts, no embankment system will be attempted without full investigation of the dangers likely to result therefrom. During the last year, the society has also published further instalments of the great work on the Flora of the Malayan Peninsula by Sir George King and Mr. Gamble, and it is now expected that another volume will see the completion of what must be regarded as a monument of industry and research. In the domain of Indian Botany, we have had important papers from Mr. Burkill, dealing with the subject of pollination of flowers, in which the learned author suggests the interesting theory that pendulous flowers are, in wet climate, of special advantage to plants and enable them to protect honey and pollen from the rain. Finally, we have had a short paper from Mr. Leake, in which he introduces the subject of the experimental breeding of Indian cottons. There have been also several other papers communicated, but not yet published, of the contents of which I am consequently unable to form any estimate; but there is one paper which I feel it would be improper for me to pass over in silence—I mean the paper on birds in Manchu, China, and Turkey by Dr. Denison Ross. I have hesitated how to classify this paper, whether to give it a place in the domain of Philology or of Science. From what I have been able to gather of its contents, I think it might claim a place in both, and on publication it ought to be of value not only to travellers but also to scientific men in the identification of birds in the regions named. From the rapid sketch I have furnished of the work done by our members and published in our *Journal* and *Memoirs* during the preceding year, I hope it would be fairly obvious even to the most unfriendly critic that there has been no lack of devotion amongst our investigators, and that the materials which they have been able to place at the disposal of scientific workers here and elsewhere will maintain, if not substantially enhance, the reputation of the society.

In my address last year, I welcomed the considerable acquisition to our strength by the enrolment of medical members and the formation of a medical section of the society. I

ventured to express a hope on that occasion that the energy of some of our new recruits might be directed to an investigation of the history of Indian medicine which affords ample field for research. It is a source of satisfaction to me to find that the field of inquiry which I commended with some confidence to the notice of our medical members has not been left altogether untouched. In the course of the last session, Dr. Girindranath Mukerji submitted to the society a paper of considerable extent, in which he elaborately examined the subject of the surgical instruments of the ancient Hindus. The questions he has raised, as to the priority of Hindu medicine over that of the Greeks, the Romans and the Arabs, are likely to arouse controversy, but in whatever way the question of priority may be decided, it seems to me to be truly remarkable that the descriptions given in our most ancient books on medicine, of the surgical instruments then in use, should bear a close resemblance to the descriptions given not only in Greek, Roman and Arab medical writings, but in many cases with the descriptions given in modern works in surgery. I trust that this subject, so peculiarly Indian, will not be left alone and will receive that attention from investigators which it undoubtedly deserves.

During the last twelve months, the publication of Sanskrit and Persian works in the Bibliothica Indica has been carried on with the usual vigour. Of the new works, the publication of which has been undertaken, the most interesting are the Rasarnava and the Sragdhra-Stotra. The former of these is an important Sanskrit medical work, and the value of the edition has been considerably enhanced by the critical notes of Dr. P. C. Roy, and Pandit Harish Ch. Kaviratna. The second is a Buddhist Sanskrit Tantric work of Kashmir, and the learned Editor Dr. Satis Chandra Vidyabhusan has considerably enhanced the value of his edition by the reproduction of a Sanskrit Commentary and two Tibetan versions, to which he has added an English translation and an elaborate introduction. Of the two Persian works, which we have brought out during the year, one is the *Baznama* by Col. Phillott, and the other is the History of Guzrat edited by Dr. Ross. Arrangements were made during the last year for the publication in future of new works to be included in the series in volumes rather than in parts. The result of this arrangement, it is confidently hoped, will be the publication of such works alone as have been carefully examined and edited by scholars who undertake the work because they have something of real importance to communicate, and not because they have to earn a certain amount of editorial fees. During the last year also the search for Sanskrit, Arabic, and Persian manuscripts has been conducted with the usual ardour. So far as the Sanskrit manuscripts collected are concerned, they include several works which have hitherto been known only by name, the most important and interesting of which is a commentary

on the Mimansa Philosophy. As regards the Arabic and Persian manuscripts it is of the utmost importance that the works now collected should be carefully catalogued and described. This task will be speedily undertaken, as the grant has been revived for a further period of five years. It is, however, a matter of regret that we have not been able to make satisfactory arrangements for the search of Bardic chronicles, and every distinguished scholar who is really competent to undertake the work has found himself preoccupied and unable to assist us in this important investigation, which, it is confidently believed, will tend to throw considerable light upon mediæval Indian history, manners and customs.

I feel that any address delivered on the present occasion would be rightly open to criticism and liable to the charge of incompleteness, if it contained no reference to the celebration of our 125th anniversary on the 15th of January last. The brilliant spectacle which was presented on that occasion is so recent and so fresh in the memory of all of us that a detailed description of that striking scene must be deemed superfluous. I desire, however, to make a public acknowledgment of my personal gratitude to all who assisted us on that memorable occasion, and to convey to them the thanks of the society. I trust it will be possible for us to publish a record of the *conversazione* with a description of the interesting and valuable exhibits which were shown on that occasion; and I also venture to express the hope that the society will undertake the preparation of a review of its work during the first quarter of the second century of its existence. A review of this character would be a valuable complement to the memorial volume, in which the history and work of the society were recorded at the time of the celebration of our centenary. I cannot of course undertake, on the present occasion, to review the work of the society during the last 25 years. That work occupies such an extensive field and is of such a diverse character that it would require a syndicate of learned men to classify and appraise the contributions of our members; but as my connection with the society covers nearly the whole of this period, and as I have always been an assiduous student of the contributions of our members—at least of such contributions as have been within the scope of my comprehension and have appealed to my imagination—I think I can, without much difficulty, recall to mind the most striking of the work which has been done by our contributors during the last quarter of a century.

In the domain of Philology, Antiquities and Indian History I can recall the work of Dr. Hoernle on the Bower and Weber manuscripts, which has been truly of an epoch-making character and reveals to us the possibility of Central Asian Antiquities throwing a flood of light on the extent and the character of ancient Indian civilization. I can also recall to mind important papers on the Geography of India by Beames, Raverty, Oldham,

and Pargiter, and a valuable monograph on the Ancient Geography of Kashmir, by Stein. I can recall to memory also a series of striking papers by Vincent Smith upon Greco-Roman influence on the civilization of India, the substance of which is now incorporated in his treatise on the History of Ancient India. I can also recollect a series of valuable memoirs on the history, geography, literature, manners and customs of Tibet, by Sarat Ch. Das, Kerle Mark, Raverty, and Walsh, which have, in recent years, been followed up by the researches of Dr. Vidyabhusan, and have illuminated many a dark corner in the history of the spread and effect of Buddhism in different parts of India. Of no mean importance to the history of the Mahomedan period have been the contributions of Beveridge, Maclaglan and Irvine, all of whom, as also Nagendra Nath Bose, have cleared up the solution of many an obscure question in Indian Chronology. The history of Buddha and Buddhism has also received considerable light from the researches of Hoey, Bloch and Waddell, the last of whom helped materially in the identification of important places in connection with the history of the life and career of Buddha. The antiquities, manners, customs and chronology of Orissa have been elucidated by Mono Mohan Chakrabarty, who has during many years past assiduously set himself to this task. The history of Nepal and the investigation of Sanskrit Manuscripts recovered therefrom have engaged the attention of distinguished scholars like Bendall, Vansitart and Haraprasad Sastri, the last of whom has made interesting discoveries in connection with the existence of Buddhism in Bengal. The first paper on the topography of Fort William by that zealous investigator Dr. Wilson was published in our Journal, and the same writer also contributed an important paper on the Geography of Hooghly, which elucidated the history of Bengal commerce in the 16th century. I have also a vivid recollection of a valuable paper on the Babylonian Origin of the Lunar Zodiac, by Dr. Thibaut, which must be rightly regarded as a landmark for investigators of that difficult topic. I can also recall to mind fascinating papers on Rajput history and literature by Grierson and Shamlal Das, the former of whom unravelled the beauties of the Padmabati and the latter of the Prithiraja Rasau. I can also recall to mind valuable philological contributions, in relation to various important dialects, for instance, the work of Grierson on the Kashmiri language, that of Bomford on western Panjabi, of Hahn on the Kolerian, of Francke on the Ladaki, of Davidson on the Kafiri, and of Hoernle on the Chattisgarhi. I cannot also afford to forget numerous interesting contributions on the decipherment of inscriptions by Fuhrer, Vincent Smith, Umesh Chandra Batabyal and Nagendra Nath Bose, nor can I pass over in silence the numerous papers on Coins by Rogers, Oliver, Vincent Smith, Hoernle, Theobold, Raverty, Thurston

and Burn—investigations apparently of a dry and uninteresting character, but really of supreme importance in furnishing the missing links, in the divers complicated chains of Indian History and Chronology. We have had also papers of great interest and importance in the field of Anthropology in which some of the most profitable workers have been Sir Herbert Risley, Gait and Dr. Annandale.

I have hitherto confined myself to the domain of history and antiquities, but similar remarks apply to workers in the field of the pure and applied sciences. In the domain of the natural sciences, amongst all the papers published by us during the last 25 years, those of Sir George King and Gamble on the Flora of the Malayan Peninsula at once arrest the attention by their quality and magnitude; but I am assured that the other contributions by Sir George, King as also the researches of Barclay, Prain, Brühl and Burkill, have considerably widened and deepened our knowledge of Indian Botany. In the field of Indian Zoology, we have had a host of enthusiastic workers, amongst whom one can easily recall the names of Atkinson, Lydekker, Stebbing, Woodmason, Giles, Walsh, Alcock, Annandale and Finn, the last of whom gave us stimulating papers on Warning Colours and Mimicry. Of Butterflies, DeNicéville and Doharty have made a speciality to such an extent that any subsequent investigator can afford to ignore their work only at considerable risk. In the domain of Indian Geology, we have not had, I regret to say, an abundance of papers, no doubt because the energies of our members in this direction are represented in the publications of the Geological Survey of India; yet we are able to point out papers in our Journal from distinguished men like Sir Thomas Holland, Oldham and Hooper; the last of whom has given us the benefit of his researches in a very different direction, namely, Ancient Indian Medicine. During the last twenty-five years also, the contributions in the domain of Physics, Chemistry and Mathematics have been of considerable extent and value.

In the field of Meteorology, I can easily recall important papers by Sir John Elliot, Sir Alex. Pedler, Hill and Little, while some of the most important researches of Dr. Bose were first communicated to the Scientific world through the medium of our publications.

In the field of Chemistry, I can without difficulty remember contributions of importance from Sir Alex. Pedler, Dr. P. C. Roy, Dr. Mann, Waterhouse, Watson, Cunningham, the Bhaduri Brothers, Neogy and other enthusiastic workers, many of whom have carried on their researches in the laboratory of the Presidency College. To all these, must be added the interesting papers on Malaria by Dr. Rogers, which were communicated and published before the foundation of a medical section of the Society.

This rapid and confessedly inadequate survey of the work of our members during the last twenty-five years proves to my mind conclusively that our investigators have not been idle, that, taken as a body, they have made solid contributions to the advancement of Science, and have thus justified the existence of the Society. It would be a mistake to suppose, however, that our work, though so extensive, has been from one point of view of so limited a character. The outline I have hurriedly sketched, takes no note of the far-reaching importance of our publications included in the Bibliotheca Indica. During the last twenty-five years we have published a large number of Sanskrit, Tibetan, Persian, and Arabic works, in many cases with translations. People who are not intimately acquainted with the work of our Society may be surprised to hear that our publications in this direction during the last quarter of a century cover 65,000 closely printed pages. These publications have placed at the disposal of Oriental Scholars all over the world accurate and carefully prepared editions of works, in most instances never before published, which throw invaluable light upon every department of oriental learning in relation to India, whether it be Philology, Philosophy and Jurisprudence, Literature, History, or Ritual. With these convincing proofs of vitality before me, I would be reluctant to take a pessimistic view of the future of our Society. At the same time, let us never forget the eloquent words of our illustrious founder, that the Society will flourish if naturalists, chemists, antiquaries, philologers and men of science will commit their observations to writing and send them to the Asiatic Society; it will languish if such communications shall be long intermitted, and, it will die away if they shall entirely cease. Let us take note of this emphatic warning; let us remember that arrested development forebodes decay; let us therefore draw within our ranks, by an alteration of our constitution, if need be, all devoted investigators of Man and Nature in this continent, and, with their co-operation, let us march on in the path of progress. Gentlemen, I thank you sincerely for the high honour you have done me, the highest honour to which a man with any pretension to scholarship can aspire in this country—and, with the deepest feelings of pleasure, I now hand over the charge of the Society to that brilliant man of science, my friend Sir Thomas Holland, whom you have so wisely chosen to preside over our deliberations.

The President announced the result of the election of Officers and Members of Council for 1909 to be as follows:—

President.

Sir Thomas Holland, K.C.I.E., D.Sc., F.R.S., F.G.S.

Vice-Presidents.

The Hon. Mr. Justice Asutosh Mukhopadhaya, M.A., D.L., D.Sc.
G. Thibaut, Esq., Ph.D., C.I.E.
Mahamahopadhyaya Haraprasad Shastri, M.A.
Lieut.-Colonel F. J. Drury, M.B., I.M.S.

Secretary and Treasurer.

General Secretary:—G. H. Tipper, Esq., M.A., F.G.S.
Treasurer:—D. Hooper, Esq., F.C.S.

Additional Secretaries.

Philological Secretary:—E. D. Ross, Esq., Ph.D.
Natural History Secretary:—I. H. Burkill, Esq., M.A., F.L.S.
Anthropological Secretary:—N. Annandale, Esq., D.Sc., C.M.Z.S.
Joint Philological Secretary:—Mahamahopadyaya Satis Chandra Vidyabhusana, M.A., Ph.D., M.R.A.S.
Medical Secretary:—Major L. Rogers, M.D., B.Sc., I.M.S.

Other Members of Council.

Harinath De, Esq., M.A.
J. A. Cunningham, Esq., B.A.
H. G. Graves, Esq., A.R.S.M.
Babu Monmohan Chakravarti, M.A., B.L.
Abdulla al-Mamun Suhrawardy, Esq., M.A., LL.D.
Lieut.-Col. F. P. Maynard, M.D., F.R.C.S., D.P.H., I.M.S.
The Hon. Mr. Justice H. Holmwood, I.C.S.

The Meeting was then resolved into the Ordinary General Meeting.

Sir Thomas Holland, K.C.I.E., D.Sc., F.R.S., F.G.S., President, in the chair.

The minutes of the last meeting were read and confirmed.

Thirty-four presentations were announced.

The Council reported that there were two vacancies in the list of Associate Members, and the Council, therefore, recommended Mr. Balkrishna Atmaram Gupte for election as an Associate Member at the next meeting.

Mr. Gupte has been Assistant Director of Ethnography for India for the last seven years. He has done much for Indian Ethnography in compiling useful information and adding to the sum of our knowledge of this subject. At present he is acting Assistant Secretary to the Victoria Memorial Trustees, and Curator of the Victoria Memorial Exhibition.

The following five gentlemen were balloted as Ordinary Members:—

Sir Harold Stuart, K.C.V.O., C.S.I., Secretary to the Government of India, Home Department, proposed by Sir Thomas Holland, K.C.I.E., seconded by Dr. E. D. Ross; *Professor E. Sommerfeldt*, Ph.D., F.C.S., F.G.S., 4, Pollock Street, proposed by Dr. C. Schulten, seconded by Professor J. A. Cunningham; *Professor J. J. Durack*, M.A. (Cantab.), Muir Central College, Allahabad, proposed by Prof. J. A. Cunningham, seconded by Mr. C. W. Peake; *Babu Priyanath Sen*, M.A., D.L., Vakil, High Court, Calcutta, proposed by Pandit Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha, seconded by the Hon. Mr. Justice Asutosh Mukhopadhaya; *Babu Charn Deb Banerjee*, B.A., LL.B., 12, Elgin Road, Allahabad, proposed by the Hon. Mr. Justice Asutosh Mukhopadhaya, seconded by Dr. Girindra Nath Mukhopadhyaya.

The following papers were read:—

1. *The Hero Gods of the Rigveda—Trita.—By* A. C. Sen, I.C.S. (retired).

This paper will be published in a subsequent number of the *Journal.*

2. *On the Correlations of Areas of Matured Crops and the Rainfall, and certain allied problems in Agriculture and Meteorology.—By* S. M. Jacob, I.C.S.

This paper will be published in the *Memoirs.*

3. *Bengali Temples and their General Characteristics.—By* Monmohan Chakravarti, M.A., B.L.

This paper will be published in a subsequent number of the *Journal.*

4. *Mosquito-larvæ eating propensity of genus Haplochilus.—By* B. L. Chaudhuri, B.Sc.

It is now almost a year since we have been trying to discover the comparative value and usefulness of some surface-swimming small fish in destroying mosquito-larvæ in our stagnant pools and other confined waters.

The matter was first brought popularly to the notice of the Indian public by "Capital" of September 1906 in noticing the reported action of the Barbadoes "Millions" (*Gardinus pœcilloides*) in keeping down mosquitoes of that island. The suggestion was to import and introduce the tiny "Millions" of Barbadoes into malaria-stricken Bengal as a factor that might lead to the reduction of the disease This suggestion was revived and pressed in many of the leading papers of India, which urged the Commissioner of Fisheries to move in the matter and obtain this particular fish from Barbadoes. It then became necessary to point out the risk and danger which always exist in and often follow from the introduction of a foreign animal into a new region—the probability of upsetting the balance of nature in case the imported fish elected to feed upon the larvæ of some friendly insects, etc. This consideration led to our hunting for some suitable species of fish already occupying a place in the economy of Nature in this country. With the help and guidance of Dr. N. Annandale the genus Haplochilus belonging to the suborder Haplomi and to the family Cyprinodontidæ was selected. Since May last systematic trials with Haplochilus panchax, H. rubrostigma, H. melanostigma have been carried on. Local names for these species are Panchokhe, Techokhe, Dhenochuno, Lal jhinga (in W. Bengal), Kánponá (in E. Bengal and Assam) and Gunjar (in Orissa). Both culex and anopheles larvæ of undoubted origin have been tried. It has been found that these tiny surface swimming fishes possess ravenous appetite for living and moving larvæ in water, and that they eat the wriggling larvæ of mosquitoes with great avidity. We have examined some of these fish also from slightly brackish waters where the supply is plentiful. They thrive and feed upon the mosquito-larvæ in their natural habitat, but by careful training these also gradually take to fresh water though in the beginning for a few days they appear dull and inactive. We are now experimenting to ascertain the numerical strength of this tiny fish necessary to keep clear of mosquito-larvæ a certain known surface of stagnant or confined water sheet, to do which it is necessary to rear a large number of these fishes. Until this proportion is ascertained no definite proposal to adopt or utilise this fish as a factor in checking the growth of mosquitoes can be definitely formulated. Co-operation of careful observers therefore is very much needed. This is my only excuse for introducing the subject before the Society. My request to the Members of the Society is that those who feel sufficiently interested in the matter should kindly give some thought to the experiment, and if the suggestion herein made finds favour with them they may directly or indirectly try to introduce the experiment at several places simultaneously on a somewhat extensive scale.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's Rooms on Wednesday, the 10th February, 1909, at 9-15 P.M.

LIEUT.-COLONEL E. H. BROWN, I.M.S., in the chair.

The following members were present:—

Lieut.-Colonel H. W. Pilgrim, I.M.S., Dr. Adrian Caddy. Dr. G. C. Chatterjee, Dr. E. Houseman, Major J. G. Jordan, I.M.S., Dr. T. F. Pearse, Captain H. B. Steen, I.M.S., Major J. C. Vaughan, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitor:—Dr. J. P. Ray.

The minutes of the last meeting were read and confirmed.

The adjourned discussion on Tubercular diseases in Bengal was continued and concluded. Communication on the sanitarium treatment of Phthisis by Captain T. H. Delany, and on the prevalence of tubercle in Calcutta by Dr. T. F. Pearse, and Dr. G. C. Chatterjee, were read.

The following resolution was proposed by Lieut.-Colonel Pilgrim, I.M.S., seconded by Dr. Pearse, and carried unanimously:—

The Medical Section of the Asiatic Society of Bengal having discussed the subject of tuberculous disease in Bengal, and its wide prevalence, are of opinion that it is an extremely common cause of great suffering and mortality both amongst the European and Indian communities, and therefore venture to call the attention of the Government of India and the local Governments to the urgent necessity for providing a properly equipped sanitarium for the treatment of early Phthisis, such as has now been provided, with most satisfactory results, in nearly all civilised countries.

LIST OF MEMBERS

OF THE

ASIATIC SOCIETY OF BENGAL.

ON THE 31ST DECEMBER, 1908.

LIST OF OFFICERS AND MEMBERS OF COUNCIL OF THE ASIATIC SOCIETY OF BENGAL FOR THE YEAR 1908.

President :

The Hon'ble Mr. Justice Asutosh Mukhopadhyaya, M.A., D.L., D.Sc., F.R.A.S., F.R.S.E.

Vice-Presidents :

Sir Thomas Holland, K.C.I.E., D.Sc., F.R.S., F.G.S.
G. Thibaut, Esq., Ph.D., C.I.E.
Mahāmahopādhyāya Haraprasād Shāstrī, M.A.

Secretary and Treasurer.

Honorary General Secretary : T. H. D. La Touche, Esq , B.A., F.G.S., succeeded by Mr. G. H. Tipper, M.A., F.G.S.
J. A. Chapman, Esq., succeeded by Mr. D. Hooper, F.C.S.

Additional Secretaries.

Philological Secretary : Lieut.-Colonel D. C. Phillott, succeeded by Dr. E. D. Ross.
Natural History Secretary : I. H. Burkill, Esq., M.A.
Anthropological Secretary: N. Annandale, Esq., D.Sc., C.M.Z.S.
Joint Philological Secretary : Mahāmahopādhyāya Satis Chandra Vidyabhusana, M.A.
Medical Secretary : Major L. Rogers, I.M.S.

Other Members of Council.

Harinath De, Esq., M.A.
J. A. Cunningham, Esq., B.A.
Lieut.-Colonel W. J. Buchanan, I.M.S.
H. G. Graves, Esq., A.R.S.M.
Lieut.-Colonel G. F. A. Harris, M.D., F.R.C.P., I.M.S.
Babu Monmohan Chakravarti, M.A., B.L.
Abdulla Al-Mamun Suhrawardy, Esq., M.A., LL.D.

LIST OF ORDINARY MEMBERS.

R. = Resident. N.R. = Non-Resident. A. = Absent. N.S. = Non-Subscribing.
L.M. = Life Member. F.M. = Foreign Member.

N.B.—Members who have changed their residence since the list was drawn up are requested to give intimation of such a change to the Honorary General Secretary, in order that the necessary alteration may be made in the subsequent edition. Errors or omissions in the following list should also be communicated to the Honorary General Secretary.

Members who are about to leave India and do not intend to return are particularly requested to notify to the Honorary General Secretary whether it is their desire to continue Members of the Society; otherwise, in accordance with Rule 40 of the rules, their names will be removed from the list at the expiration of three years from the time of their leaving India.

Date of Election.		
1907 June 5.	R.	Abdulla al-Mamun Suhrawardy, M.A., D.LITT., LL.D., Barrister-at-Law. 34, *Elliott Road, Calcutta.*
1894 Sept. 27.	N.R.	Abdul Wali, Maulavi, District Sub-Registrar. *Purulia.*
1895 May 1.	R.	Abdus Salam, Maulavi, M.A., Presidency Magistrate. *Calcutta.*
1901 April 3.	N.R	Abhaya Sankar Guha, Extra Assistant Commissioner. *Nowgong.*
1902 June 4.	N.R.	Abu Ahmed Ghuznavi. *Mymensingh.*
1903 April 1.	N.R.	Abul Aâs, Maulavi Sayid, Raees and Zemindar. *Langar Toli, Bankipore.*
1907 April 3.	N.R.	Abul Faiz Muhammad Abdul Ali, M.A., Deputy Magistrate. *Putuakhali, Backergunge.*
1904 Sept. 28.	N.R.	Ahmad Hasain Khan, Munshi. *Jhelum.*
1888 April 4.	R.	Ahmud, Shams-ul-Ulama Maulavi. 3, *Maulavi's Lane, Calcutta.*
1898 Nov. 2.	N.R.	Akshaya Kumar Maitra, B.A., B.L. *Rajshahi.*
1885 Mar. 4.	L.M.	Ali Bilgrani, Sayid, B.A., A.R.S.M., F.G.S. *Chudderghaut, Hyderabad.*
1899 Jan. 4.	N.R.	Ali Hussain Khan, Nawab. *Lucknow.*
1903 Oct. 28.	R.	Allan, Dr. Alexander Smith, M.B. 3, *Esplanade, East, Calcutta.*
1902 Feb. 5.	R.	Ambica Churan Sen, I.C.S. (retired). 57, *Lansdowne Road, Calcutta.*
1898 Feb. 2.	R	Amrita Lal Bose, Dramatist. 9-2, *Ram Chundra Maitra's Lane, Calcutta.*
1897 Jan. 6.	R.	Amrita Lal Sircar, Dr., F.C.S. 51, *Sankaritolla Lane, Calcutta.*

Date of Election.		
1905 July 5.	R.	Amulya Charan Ghosh Vidyabhusana. 66, *Manicktolla Street, Calcutta.*
1893 Aug. 31.	A.	Anderson, Major Adam Rivers Steele, B.A., M.B., D.P.H., C.M.Z.S. I.M.S. *Europe.*
1884 Sept. 3.	A.	Anderson, J. A. *Europe.*
1897 June 2.	R.	Annada Prasad Bose, M.A., Deputy Magistrate and Deputy Collector. *Howrah.*
1904 Sept. 28.	R.	Annandale, Nelson, D.SC., C.M.Z.S., Superintendent, Indian Museum. *Calcutta.*
1904 Jan. 6.	R.	Ashton, Ralph Percy. 4, *Fairlie Place, Calcutta.*
1902 Aug. 27.	R.	Ashutosh Chaudhuri, Barrister-at-Law. 16, *Store Road, Calcutta.*
1886 May 5	R.	Asutosh Mukhopadhyaya, The Hon'ble Mr. Justice, M.A., D.L., F.R.A.S., F.R.S.E., Judge, High Court. *Calcutta.*
1904 July 6.	N.R.	Aulad Hasan, Khan Bahadur. Sayid, Inspector of Registration. *Dacca.*
1870 Feb. 2.	L.M.	Baden-Powell, Baden Henry, M.A., C.I.E. *Ferlys Lodge,* 29, *Banbury Road, Oxford, England.*
1891 Mar. 4.	N.R.	Baillie, Duncan Colvin, I.C.S., Member, Board of Revenue, North-West Provinces of Agra and Oudh. *Allahabad.*
1900 Aug. 29.	R.	Baker, His Honour Sir Edward Norman, K.C.S.I., I.C.S., Lieutenant-Governor of Bengal. *Calcutta.*
1893 Sept. 28.	R.	Banawari Lala Chaudhuri, B.SC., Edin. 120, *Lower Circular Road, Calcutta.*
1891 Feb. 4.	N.R.	Ban Behari Kapur, Raja, C.S.I. *Burdwan.*
1869 Dec. 1.	L.M.	Barker, Robert Arnold, M.D., F.G.S. *Fairfield, Oxford Road, Reading, Berkshire, England.*
1898 Mar. 2.	N.R.	Barnes, Herbert Charles, M.A., I.C.S., Magistrate and Collector. *Shillong.*
1908 Nov. 4.	N.R.	Barnes, James Hector, B.SC., F.I.C., F.C.S., Principal, Punjab Agricultural College, and Agricultural Chemist, Punjab Govt. *Lyallpur, Punjab.*
1907 Feb. 6.	N R.	Barrow, John Rothney, Inspector of Schools. *Jorhat, Assam.*
1902 May 7.	R.	Bartlett, Edward William John. 4, *Esplanade, East, Calcutta.*
1895 July 3.	L.M.	Beatson-Bell, Nicholas Dodd, B.A., C.I.E., I.C.S. *Europe.*
1907 Feb. 6.	N.R.	Bell, Charles Alfred, I.C.S. *Gaya.*
1898 June 1.	N.R.	Bepin Behari Gupta. *Ravenshaw College, Cuttack.*
1880 April 7.	N.R.	Bepin Chandra Rai. *Giridih, Chota Nagpur.*
1906 Nov. 7.	N.R.	Bergtheil, Cyril. *Sirseah, Mozufferpore.*

Date of Election.		
1876 Nov. 15.	F.M.	Beveridge, Henry, I.C.S. (retired). *Pitfold, Shottermill, Haslemere, Surrey, England.*
1893 Mar. 1.	N.R.	Bharat Singh, Maharaja Kumara Sirdar, I.C.S. (retired). *Allahabad.*
1903 Feb. 4.	N.R.	Bhawani Das Batra, Rai, M.A., Revenue Minister, Jammu and Kashmir State. *Srinagar, Kashmir.*
1902 Mar. 5.	R.	Binoy Krishna Deb, Raja Bahadur. 106-1, *Grey Street, Calcutta.*
1907 Oct. 30.	R.	Birendra Nath Ghosh, Dr., L.M.S., Medical Practitioner. 109, *College Street, Calcutta.*
1908 Nov. 4.	N.R.	Bisvesvar Bhattacharji, Deputy Magistrate and Deputy Collector. *Nilphamari.*
1897 Feb. 3.	R.	Bloch, Theodor, PH.D., Archæological Surveyor, Eastern Circle. 27, *Chowringhee, Calcutta.*
1893 Feb. 1.	N.R.	Bodding, The Revd. P. O. *Mahalpahari, viâ Rampore Haut, Sonthal Parganas.*
1895 July 3.	A.	Bonham-Carter, Norman, I.C.S. *Europe.*
1906 Sept. 19.	R.N.	Bradley-Birt, Francis Bradley, I.C.S. *Midnapore.*
1904 July 6.	R.	Brajendra Nath De, M.A., I.C.S., Magistrate and Collector. *Chinsura.*
1906 Nov. 7.	N.R.	Bramley, Percy, Superintendent of Police. *Agra.*
1908 July 1.	N.R.	Brojendra Nath Seal, M.A., Victoria College. *Cooch Behar.*
1906 July 4.	R.	Brown, Lieut.-Col. Edwin Harold, M.D., I.M.S. 2, *Alipur Road, Calcutta.*
1907 July 3.	R.	Brown, John Coggin, B.Sc., F.G.S., F.C.S., Assistant Superintendent, Geological Survey of India. *Calcutta.*
1905 Mar. 1.	N.R.	Brown, William Barclay, I.C.S., District and Sessions Judge. *Kamrup.*
1907 June 5.	A.	Browning, Colin Harington, M.A. *Europe.*
1901 Sept. 25.	R.	Buchanan, Lieut.-Col. Walter James, I.M.S., Inspector-General of Jails 19, *Writers' Buildings, Calcutta.*
1901 June 5.	R.	Burkill, Isaac Henry, M.A., Reporter on Economic Products to the Government of India. *Calcutta.*
1896 Jan. 8.	N.R.	Burn, Richard, I.C.S. *Gonda, Oude.*
1900 May 2.	F.M.	Butcher, Flora, M.D. *Asylum, Springfield, Cupar Fife, Scotland.*
1904 Aug. 3.	A.	Bythell, Lieut.-Col. William John, R.E. *Europe.*
1898 Sept. 30.	A.	Cable, Sir Ernest, *Kt.* *Europe.*
1906 Dec. 5.	R.	Caddy, Dr. Adrian, M.D. (Lond.), F.R.C.S. (Eng.), D.P.H., R.C.P.S. (Lond.). 2-2, *Harrington Street, Calcutta.*

Date of Election.		
1906 July 4.	R.	Caddy, Dr. Arnold, M.D., F.R.C.S. 2-2, *Harrington Street, Calcutta.*
1907 Apl. 3.	N.R.	Calvert, Major John Telfer, M.B., M.R.C.P., I.M.S. *Darjeeling.*
1907 Mar. 6.	L.M.	Camaji Byramji Navroji Cama, B.A., LL.B., I.C.S. *Bilaspur, Central Provinces.*
1901 Mar. 6.	N.R.	Campbell, William Edgar Marmaduke, I.C.S., Magistrate and Collector. *Hamirpur.*
1895 July 3.	R.	Carlyle, Robert Warrand, C.I.E., I.C.S., Secretary to the Government of India, Revenue and Agriculture Department. *Calcutta.*
1899 June 7.	N.R.	Chandra Kumar Sarkar. *Kawkanik, Moulmein.*
1901 Aug. 7.	R.	Chandra Narayan Singh, Rai Bahadur. 16, *Theatre Road, Calcutta.*
1906 Jan. 3.	A.	Chapman, John Alexander. *Europe.*
1904 July 6.	N.R.	Charles, Albert Pendrill, B.A., I.C.S., Registrar, Court of Judicial Commissioner. *Lucknow.*
1903 Sep. 23.	F.M.	Chinta Ito, Professor Dr. *Engineering College, Tokyo, Japan.*
1907 July 3.	R.	Christie, William Alexander Kynock, B.SC., PH.D., Chemist, Geological Survey of India. *Calcutta.*
1906 Nov. 7.	R.	Clarke, Geoffrey Roth, I.C.S. 16, *Loudon Street, Calcutta.*
1907 Dec. 4.	R.	Cohen, Rachel Nathaniel, M.B., F.R.C.S., Lady Supdt., Lady Dufferin Victoria Hospital. *Calcutta.*
1906 July 4.	R.	Connor, Captain Frank Powell, F.R.C.S. (Eng.), L.R.C.P. (Lond.), I.M.S., Medical College. *Calcutta.*
1908 Jan. 1.	N.R.	Conway-Poole, Capt. Ivan Maxwell, I.A., Supply and Transport Corps. *Allahabad.*
1908 Nov. 4.	N.R.	Cook, Capt. Lewis, I.M S., Lunatic Asylum. *Berhampore.*
1903 Aug. 26.	R.	Copleston, The Most Revd. Dr. Reginald Stephen, D.D. *Lord Bishop of Calcutta.*
1898 June 1.	F.M.	Cordier, Dr. Palmyr. 37, *Rue des Grange, Besançons (Douls), Paris, France.*
1907 July 3.	R	Cotter, Gerald de Purcell, Assistant Superintendent, Geological Survey of India. *Calcutta.*
1908 Jan. 1.	R.	Crake, Dr. Herbert Milverton. 234/6, *Lower Circular Road, Calcutta.*
1901 June 5.	R.	Crawford, Lieut.-Col. Dirom Grey, I.M.S., Civil Surgeon. *Hughli.*
1876 Mar. 1.	F.M.	Crawfurd, James, B.A., I.C.S. (retired). *Thornwood, Uddington, Lanarkshire, Scotland.*
1887 Aug. 25.	R.	Criper, William Risdon, F.C.S., F.I.C., A.R.S.M. *Konnagar, E.I.R.*
1895 July 3.	R.	Cumming, John Ghest, I.C.S. *Alipore, Calcutta.*

Date of Election.		
1905 July 5.	R.	Cunningham, John Arthur, B.A. *Alipur Observatory, Calcutta.*
1908 Sept. 2.	R.	Cunningham, John Richard, M.A., Assistant Director of Public Instruction, Bengal. *Calcutta.*
1873 Dec. 3.	F.M.	Dames, Mansel Longworth, I.C.S. (retired). *Algeria, Enfield, Middlesex, England.*
1885 Nov. 4.	R.	Damodar Das Barman. 55, *Clive Street, Calcutta.*
1905 July 5.	N.R.	Das, J. N. *Daulatpur P.O., Khulna.*
1904 Aug. 3.	N.R.	Dattalraya Balwant Parasnis. *Satara.*
1906 Dec. 5.	N.R.	Deare, Major Benjamin Hobbs, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.P.H. (Camb.), I.M.S. *Hazaribagh.*
1904 Sept. 28.	N.R.	DeCourcy, William Bleunerhasset. *Silchari P.O., Cachar.*
1895 Dec. 4.	N.R.	Delmerick, Charles Swift, Sub-Deputy Opium Agent. *Bareilly.*
1906 Dec. 5.	N.R.	Dentith, Arthur William, I.C.S. *Cooch Behar.*
1898 Jan. 5.	R.	Dods, William Kane, Agent, Hongkong and Shanghai Banking Corporation. *Calcutta.*
1906 Dec. 5.	R.	Donnan, Major William, Indian Army, Examiner of Ordnance Factory Accounts in India. *Calcutta.*
1902 July 2.	R.	Doxey, Frederick. 9, *Queen's Park, Ballygunge, Calcutta.*
1902 Jan. 8.	A.	Drummond, James R., I.C.S. (retired). *Europe.*
1892 Sept. 22.	R.	Drury, Lieut.-Col. Francis James, I.M.S. *Howrah.*
1889 Jan. 2.	A.	Dudgeon, Gerald Cecil. *Europe.*
1905 April 5.	N.R.	Dunnett, James Macdonald, I.C.S., Assistant Settlement Officer. *Muzafargarh.*
1908 April 1.	R.	Duval, Herbert Philip, M.A., I.C.S., United Service Club. *Calcutta.*
1905 May 3.	R.	Dwarkanath Chakravarti, M.A., B.L., Vakil, High Court. *Calcutta.*
1906 Nov. 7.	N.R.	Eadie, Lieut. John Inglis, 97, *Deccan Infantry. Bolaram.*
1907 Sept. 25.	R.	Eakins, Dr. Olin, M.D., Chief Medical Officer, New York Life Assurance. 10/1, *Rainey Park, Calcutta.*
1900 July 4.	N.R.	Earle, Archdale, I.C.S. *Bankipur.*
1903 May 6.	N.R.	Edwards, Walter Noel. *Sootea P.O., Tezpur, Assam.*
1900 Mar. 7.	A.	Fanshawe, Sir Arthur Upton, C.S.I., K.C.I.E., I.C.S. *Europe.*
1901 Mar. 6.	A.	Fergusson, J. C. *Europe.*

Date of Election.		
1904 Aug. 3.	R.	Fermor, Lewis Leigh, A.R.S.M., B.SC., F.G.S., Assistant Superintendent, Geological Survey of India. *Calcutta.*
1908 Sept. 2.	R.	Fida Ali, Syed. 13, *Goristan Lane, Calcutta.*
1906 Dec. 5.	R.	Finck, Herman H. G., M.D., Surgeon to the Consulate-General for Germany. 19, *Camac Street, Calcutta.*
1906 Oct. 31.	N.R	Finlow, Robert Steel, Fibre Expert to the Govt. of Eastern Bengal and Assam. *Pusa, Tirhoot.*
1907 Mar. 6.	R.	Firminger, Revd. Walter Kelly, M.A., B.D., F.R.G.S. Chaplain, St. Stephen's Church. *Kidderpore, Calcutta.*
1908 Mar. 4.	N.R.	Fitzgerald, Henry George, Superintendent of Police. *Kohat.*
1906 Dec. 5.	R.	Foster, Captain Henry Bertram, I.M.S., Presidency General Hospital. *Calcutta.*
1908 Sept. 2.	R.	Foster, Lieut. Rodney, Indian Army, Survey of India. *Calcutta.*
1904 May 4.	N.R.	Framjee Jamasjee Thanawala. 90, *Cawasjee Patel Street, Fort, Bombay.*
1905 Jan. 4.	A.	Fraser, Sir Andrew Henderson Leith, M.A., LL.D., K.C.S.I. *Europe.*
1902 April 2.	A.	Fuller, Sir Joseph Bampfylde, K.C.S.I. *Europe.*
1903 Mar. 4.	R.	Gage, Captain Andrew Thomas, M.A., M.B., B.SC., F.L.S., I.M.S. *Royal Botanic Garden, Sibpur, Howrah.*
1893 Jan. 11.	A.	Gait, Edward Albert, C.I.E., I.C.S. *Europe.*
1908 Feb. 5.	N.R.	Gardener-Brown, John Gerald Gardener, M.A., Muir Central College. *Allahabad.*
1907 Sept 25.	N R.	Gibbon, Captain Charles Monk. 89, *Royal Irish Fusiliers. United Service Club, Simla.*
1906 Feb. 7.	R.	Girindra Kumar Sen. *Presidency College, Calcutta.*
1908 Feb 5.	R.	Girindra Nath Mukhopadhyaya, Dr., B.A., M.B., 80, *Russa Road, North, Bhowanipur, Calcutta.*
1902 Feb. 5.	R.	Girish Chandra Ghosh, Dramatist. 13, *Bose-para Lane, Calcutta.*
1889 June 5.	N.R.	Girjanath Roy, Maharaja. *Dinagepore.*
1908 Feb. 5.	R.	Gopal Chandra Chatterji, Dr., Medical College. *Calcutta.*
1905 Aug. 2.	N.R.	Gourlay, Captain Charles Aikman, I.M.S., Offg. Deputy Sanitary Commissioner, Eastern Bengal and Assam. *Shillong.*
1901 Aug. 28.	N.R.	Govinda Das. *Durgakund, Benares City.*
1897 July 7.	A.	Grant, Major John Wemyss, I.M.S. *Europe.*
1905 May 3.	R.	Graves, Henry George, A.R.S.M. *United Service Club, Calcutta.*

Date of Election.		
1907 June 5.	R.	Green, Lieut.-Col. Charles Robert Mortimer, M.D., F.R.C.S., I.M.S., 6, *Harrington Street, Calcutta.*
1900 Dec. 5.	L.M.	Grieve, James Wyndham Alleyne, Deputy Conservator of Forests. *Darjeeling.*
1904 Jan. 6.	N.R.	Gulab Shanker Dev Sharman, F.T.S. *Futtehpore, Agra District, U.P.*
1901 Mar. 6.	N.R.	Habibur Rahman Khan, Maulavi, Raees. *Bhikanpur, Dt. Aligarh.*
1892 Jan. 6.	F.M.	Haig, Major Wolseley, Indian Army, c o Messrs. H. S. King & Co., 9. *Pall Mall, London, S.W.*
1907 Aug. 7.	F.M.	Haines, Henry Haselfoot, F.C.S., F.L.S. *Boreham House, Haverstock Hill, Hampstead, London, N.W.*
1908 June 3.	R.	Hallowes, Kenneth Alexander Knight, B.A., A.R.S.M., F.G.S., Assistant Superintendent, Geological Survey of India. *Calcutta.*
1904 Sept. 28.	R.	Hallward, Norman Leslie. 6, *Camac Street, Calcutta.*
1889 Mar. 6.	N.R.	Hanuman Prasad, Raees and Zemindar. *Chunar.*
1885 Feb. 4.	R.	Haraprasad Shastri, Mahamahopadhyaya, M.A. 12/1/4, *Pataldanga Street, Calcutta.*
1907 Feb. 6.	N.R.	Hare, His Honour Sir Lancelot, K.C.S.I., I.C.S., Lieutenant-Governor of Eastern Bengal and Assam. *Shillong.*
1904 Jan. 6.	R.	Harendra Krishna Mukerjee, M.A. 54, *Sankaripara Road, Calcutta.*
1903 June 3.	R.	Harinath De, M.A., Librarian, Imperial Library. *Calcutta.*
1902 Dec. 3.	N.R.	Harnarain Shastri, Goswami. *Hindu College, Delhi.*
1908 Feb. 5.	R.	Harniman, B. G. 50. *Park Street, Calcutta.*
1906 Dec. 5.	N.R.	Harris, Lieut. G. 56 *Infantry, F.F., Hangu.*
1906 July 4.	R.	Harris, Lt.-Col. George Francis Angelo, M.D., F.R.C.P., I.M.S. 14, *Russell Street, Calcutta.*
1908 April 1.	R.	Harrison, Edward Philip. 10, *Middleton Row, Calcutta.*
1907 June 5.	R	Harwood, Col. J. G., F.R.C.S., R.A.M.C., Principal Medical Officer, Presidency and Assam Brigades. *United Service Club, Calcutta.*
1884 Mar. 5.	L.M.	Hassan Ali Mirza, Sir Wala Qadr Sayid, G.C.I.E. *Murshidabad.*
1897 Feb. 3.	R.	Hayden, Henry Herbert, B.A., B.E., F.G.S., Superintendent, Geological Survey of India. *Calcutta.*
1906 Dec. 5.	A.	Hayward, Major William Davey, M.B., I.M.S. *Europe.*

Date of Election.		
1905 July 5.	N.R.	Hemchandra Gossain. Extra Assistant Commissioner. *Tezpur.*
1905 May 3.	N.R.	Hemendra Prasad Ghose, Zemindar and Litterateur. *Prasad Lodge, Changalbha P.O., Jessore.*
1907 Nov. 6.	N.R.	Hepper, Captain Lionel Lees. *Royal Artillery, Maymyo, Burma.*
1908 June 3.	R.	Herron, Alexander Macmillan, B.SC., Asst. Supdt., Geological Survey of India. *Calcutta.*
1904 Dec. 7.	N.R.	Hill, Ernest George. *Muir Central College, Allahabad.*
1908 June 3.	R.	Hira Lall Bose, Dr. 25/2, *Mott's Lane, Calcutta.*
1908 April 1.	N.R.	Hirst, Capt. Frederick Christian, Indian Army. *Mussoorie.*
1906 Dec. 5.	N.R.	Hirst, Reginald John, District Superintendent of Police. *Purneah.*
1891 July 1.	R.	Holland, Sir Thomas Henry, K.C.I.E., D.SC., A.R.C.S., F.G.S., F.R.S., Director, Geological Survey of India. *Calcutta.*
1908 July 1.	R.	Holmwood, The Hon. Mr. Justice Herbert, I.C.S. 22, *Theatre Road, Calcutta.*
1898 Feb. 2.	R.	Hooper, David, F.C.S. 1, *Sudder Street, Calcutta.*
1901 Dec. 4.	A.	Hossack, Dr. William Cardiff. *Europe.*
1907 Feb. 6.	R.	Houseman, Dr. Edward A., B.A., M.B., B.C. (Cantab), Medical Officer. *Lilloouh, E.I.Ry.*
1873 Jan. 2.	L.M.	Houstoun, George L., F.G.S., *Johnstone Castle, Renfrewshire, Scotland.*
1906 May 2.	N.R.	Howell, Evelyn Berkeley, B.A., I.C.S. *Peshawar.*
1905 July 5.	N.R.	Humphries, Edgar de Montfort, B.A., I.C.S., Settlement Officer. *Banda.*
1908 June 3.	A.	Hutchinson, C. M. *Europe.*
1908 Mar. 4.	F.M.	Hyde, J. H. 18, *Rue Adolphe-Yvon, Paris.*
1906 Dec. 5.	N.R.	Jack, James Charles, I.C.S., Settlement Officer, Eastern Bengal and Assam. *Faridpur.*
1905 Nov. 1.	N.R.	Jackson, Arthur Mason Tippett, I.C.S. *C/o Messrs. Grindlay Groom & Co., Bombay.*
1904 Jan. 6.	N.R.	Jackson, Victor Herbert, M.A. *Patna College, Bankipur.*
1908 Nov. 4.	N.R.	Jacob, Sydney Montague, I.C.S. *Sialkot.*
1885 April 1.	R.	Jadoonath Sen, Civil Engineer. 35, *Sib Narain Das' Lane, Calcutta.*
1898 Mar. 2.	N.R.	Jadunath Sarkar. *Patna College, Bankipur.*
1903 July 1.	R.	Jagadindranath Roy, Maharaja Bahadur. 6, *Lansdowne Road, Calcutta.*
1895 Mar. 6.	A.	Jagadis Chandra Bose, M.A., D.SC., C.I.E. *Europe.*

Date of Election.		
1905 July 5.	N.R.	Jain Vaidya. *Juhari Bazar, Jaipur.*
1907 Dec. 4.	R.	James, Henry Rosher, M.A., Bengal Education Service, Principal, Presidency College. *Calcutta.*
1895 Aug. 29.	N.R.	Jatindranath Rai Chaudhuri, M.A., B.L., Zemindar. *Taki, Jessore.*
1907 Sept. 25.	N.R.	Jenkins, Owen Francis, I.C.S., Offg. Joint Magistrate. *Budaon, U.P.*
1889 Jan. 2.	R.	Jogendra Chandra Ghose, The Hon. Mr., M.A., B.L., Pleader, High Court. 25, *Hurrish Chunder Mookerjee Road, Bhowanipore, Calcutta.*
1896 Mar. 4.	R.	Jogendra Nath Das-Gupta, B.A. (Oxon.), Barrister-at-Law. *Hughli College, Chinsurah.*
1902 May 7.	R.	Jogendra Nath Sen Vidyabhusana, M.A. 31, *Prasana Kumar Tagore's Street, Calcutta.*
1908 June 3.	R.	Jones, Herbert Cecil, A.R.S.M., A.R.C.S., F.G.S., Asst. Supdt. Geological Survey of India. *Calcutta.*
1906 July 4.	R.	Jones, Lieut.-Col. John Lloyd, M.B. (Dub.), M.R.C.S. (Lond.), D.P.H. (Cantab), F.C.A., I.M.S. *United Service Club, Calcutta.*
1899 Sep. 29.	R.	Jotindra Nath Mukharji, B.A., Solicitor. 3, *Old Post Office Street, Calcutta.*
1907 Mar. 6.	N.R.	Jwala Sahai, Munshi, Retired Nazim of Dig, Bharatpur State. *Sohua, Gurgaon District.*
1908 Sept. 23.	N.R.	Jyotiprakas Nande, Lala, Zemindar. *Burdwan.*
1904 Mar. 4.	N.R.	Kamlanand Singh, Kumar. *Srinagar Raj, Srinagar P.O., Purneah District.*
1905 May 3.	F.M.	Kashi Prasad Jayaswal. C/o Manager, Narghat Bazar Lac Factory. *Mirzapur.*
1901 Jan. 2.	A.	Kavasjee Jamasjee Badshah, B.A., I.C.S. *Europe.*
1906 Dec. 5.	A.	Kaye, George Rusby. *Europe.*
1877 Aug. 30.	R.	Kedar Nath Dutt. 1, *Sikdarpara Lane, Calcutta.*
1882 Mar. 1.	N.R.	Kennedy, Pringle, M.A., B.L., Vakil. *Mozafferpur.*
1906 Aug. 1.	R.	Kennedy, Dr. William Willoughby, M.A., M.D., D.P.H., M.R.S.C., L.R.C.P. 36, *Chowringhee, Calcutta.*
1906 Sept. 19.	R.	Kesteven, Charles Henry, Solicitor to Government. 26, *Dalhousie Square, Calcutta.*
1908 Feb. 5.	N.R.	King, Capt. George, M.B., I.M.S. *Puri.*
1895 Sept. 19.	N.R.	Kiran Chandra De, B.A., I.C.S., Registrar of Co-operative Credit Societies, Eastern Bengal and Assam. *Shillong.*
1904 May 4.	N.R.	Knox, Kenneth Neville, I.C.S., Magistrate and Collector. *Banda.*

Date of Election.		
1896 July 1.	R.	Küchler, George William, M.A., Director of Public Instruction, Bengal. *Calcutta.*
1894 July 4.	N.R.	Kushal Pal Singh, Raja, M.A. *Narki.*
1895 Aug. 29.	R.	Lachmi Narayan Singh, M.A., B.L., Pleader, High Court. *Calcutta.*
1901 June 5.	N.R.	Lajpat Rai, Lala, Pleader, Chief Court. *Lahore.*
1887 May 4.	L.M.	Lanman, Charles Rockwell, 9, *Farrar Street*, *Cambridge, Massachusetts, U.S. America.*
1889 Mar. 6.	R.	La Touche, Thomas Henry Digges, B.A., F.G.S., Superintendent, Geological Survey of India. *Calcutta.*
1902 July 2.	N.R.	Leake, Henry Martin, M.A., F.L.S., Economic Botanist to the Government of United Provinces. *Cawnpur.*
1889 Nov. 6.	R.	Lee, William A., F.R.M.S. 38, *Strand Road*, *Calcutta.*
1903 July 1.	N.R.	Lefroy, Harold Maxwell, M.A., F.E.S., Imperial Entomologist. *Mozufferpore.*
1902 Oct. 29.	A.	Lewes, A. H. *Europe.*
1908 Feb. 5.	N.R.	Lindesay, Major Victor Edward Hugh, M.B., I.M.S. *Chapra.*
1907 Dec. 4.	N.R.	Lindsay, James Hamilton, M.A., I.C.S. *Sewan.*
1889 Feb. 6.	A.	Little, Charles, M.A. *Europe.*
1907 Dec. 4.	N.R.	Little, James Henry, Assistant Master, Victoria School. *Kurseong.*
1907 Mar. 6.	R.	Lloyd, Captain Richard Ernest, M.B., B.SC., I M.S. 27, *Chowringhee Road*, *Calcutta.*
1906 Feb. 7.	A.	Logan, Alexander Cochrane, I.C.S. *Europe.*
1906 Oct. 31.	F.M.	Luard, Captain Charles Eckford, Indian Army, M.A. (Oxon), 20, *Elm Tree Road, London.*
1902 July 2.	R.	Luke, James, Journalist. 98, *Clive Street*, *Calcutta.*
1905 Aug. 2.	R.	Lukis, Lt.-Col. Charles Pardey, M.B., F.R.C.S., I.M.S. *Medical College, Calcutta.*
1870 April 7.	L.M.	Lyman, B. Smith. 708, *Locust Street, Philadelphia, U.S. America.*
1896 Mar. 4.	N.R.	MacBlaine, Frederick, I.C.S., District and Sessions Judge. *Saran.*
1906 Nov. 7.	R.	MacCabe, William Bernard, M.INST.C.E., F.I.C. Chief Engineer to the Corporation. *Calcutta.*
1905 Aug. 2.	R.	McCay, Captain David, M.B., I.M.S., Professor of Physiology. *Medical College, Calcutta.*
1907 Aug. 7.	N.R.	McIntosh, William, Agent, Bank of Bengal. *Hyderabad.*
1907 April 3.	R.	Mackelvie, Captain Maxwell, I.M.S., Resident Physican. *Medical College, Calcutta.*

Date of Election.		
1906 April 4.	N.R.	Mackenzie, Evan, Church of Scotland Mission. *Kalimpong, via Siliguri.*
1893 Jan. 11.	L.M.	Maclagan, The Hon. Mr. Edward Douglas, M.A., I.C.S., Chief Secretary to the Government of the Punjab. *Lahore.*
1899 Mar. 1.	F.M.	McMinn, Charles W., B.A., I.C.S. (retired). *C/o Messrs. Grindlay & Co., 55, Parliament Street, London.*
1891 Feb. 4.	R.	Macpherson, Duncan James, M.A., C.I.E., I.C.S. *Chinsura.*
1902 April 2.	N.R.	Maddox, Major Ralph Henry, I.M.S. *Ranchi.*
1893 Jan. 11.	L.M.	Madho Rao Scindia Alijah, Bahadur, Colonel, His Highness Maharajah Sir, G.C.S.I., G.C.V.O., A.D.C., LL.D., Maharajah of Gwalior. *Jai Bilas, Gwalior.*
1907 July 3.	R.	Mahendra Nath De, M.A., B.SC., Professor, Bengal National College. *Calcutta.*
1895 Aug. 29.	R.	Mahmud Gilani, Shams-ul-Ulama Shaikh. 23, *Lower Chitpur Road, Calcutta.*
1907 Mar. 6.	N.R.	Manekshaw Jamshedi Kelawala, Lt.-Col., I.M.S. 88, *Carnatic Infantry, St. Thomas Mount, Madras.*
1906 June 6.	R.	Manmatha Nath Mitra, Kumar. 34, *Shampukur Street, Calcutta.*
1908 Mar. 4.	R.	Manmatho Nath Moitry, Landholder. *Serampore.*
1901 June 5.	N.R.	Mann, Dr. Harold Hart, D.SC., M.SC., F.L.S., Principal, Agricultural College. *Poona.*
1899 Aug. 30.	N.R.	Mannu Lal, Dr., Civil Surgeon. *Banda.*
1905 Dec. 6.	N.R.	Marsden, Edmund, B.A., F.R.G.S. *Bombay.*
1902 May 7.	N.R	Marshall, John Hubert, Director-General of Archæology. *Simla.*
1892 April 6.	R.	Maynard, Lieut. Col. Frederic Pinsent, M.B., D.P.H., F R.C.S., I.M.S., Professor of Ophthalmic Surgery, Medical College. *Calcutta.*
1905 Feb. 1.	A.	Megaw, Captain John Wallace Dick, I.M.S. *Europe.*
1895 July 3.	N.R.	Melitus, Hon. Mr. Paul Gregory, C.I.E., I.C.S. *Shillong.*
1900 Jan. 19.	R.	Michie, Charles. 8, *Mission Row, Calcutta.*
1884 Nov. 5.	R.	Middlemiss, Charles Stewart, B.A., F.G.S., Superintendent, Geological Survey of India. *Calcutta.*
1905 Dec. 6.	R.	Midhut Mohamed Hossain Khan. 8, *Golam Sobhan's Lane, Calcutta.*
1884 Sep 3.	R.	Miles, William Harry. 7, *Church Lane, Calcutta.*
1904 April 6.	R.	Miller, The Hon. Mr. John Ontario, C.S.I., I.C.S., Revenue & Agriculture and P. W. D. Member, Government of India. *Calcutta.*

Date of Election.		
1898 April 6.	N.R.	Milne, Major Charles John Robertson, M.B., I.M.S. *Berhampur.*
1906 Mar. 7.	N.R.	Milsted, Walter Percy Spencer. *Boys' High School, Allahabad.*
1908 Jan. 1.	N.R.	Moberly, Arthur Norman, M.A., I.C.S. *Sambalpur.*
1885 June 3.	N.R.	Mohammad Naemullah, Maulavi. *Bijnor.*
1880 Aug. 4.	L.M.	Mohanlall Vishnulall Pandia, Pandit, F.T.S. *Muttra.*
1906 Mar. 7.	N.R.	Mohinimohan Mitra, M.A., B.L., Pleader. *Burdwan.*
1908 Mar. 4.	N.R.	Mollison, James, Inspector-General of Agriculture, C.P. *Nagpur.*
1901 Aug. 7.	N.R.	Molony, Edmund Alexander, I.C.S. *Government Farm, Cawnpur.*
1890 June 4.	R.	Monmohan Chakravarti, M.A., B.L., Bengal Provincial Civil Service. 14, *Palmer's Bazaar Road, Bulliaghatta, Calcutta.*
1895 July 3.	N.R.	Monohan, Francis John, I.C.S., Commissioner, Assam Valley District. *Shillong.*
1906 Dec. 5.	N.R.	More, Lieut. James Carmichael, 51st Sikhs, F.F. *Bannu.*
1907 June 5.	N.R.	Morgan, Captain John Henry, Indian Army, Supply & Transport Corps. *Rawalpindi.*
1906 Dec. 5.	N.R.	Morton, Captain Sidney. *24th Punjabis, Dilkhusha, Lucknow.*
1908 Dec. 2.	R.	Moses, Capt. Owen St. John, M.D., F.R.C.S., I.M.S. *Resident Physician, Medical College, Calcutta.*
1905 Jan. 4.	R.	Muksoodan Das. 13, *Shumbhoo Nath Mullick's Lane, Calcutta.*
1906 July 4.	R	Mulvany, Major John, I.M.S. *Presidency General Hospital, Calcutta.*
1905 Mar. 1.	R.	Muralidhar Banerjee. *Sanskrit College, Calcutta.*
1906 Dec. 5.	R.	Murphy, Captain Charles Cecil Rowe, *The Suffolk Regiment.* 42, *Chowringhee Road, Calcutta.*
1906 Dec. 5.	R.	Murray, Captain John George Patrick, I.M.S. *Presidency General Hospital, Calcutta.*
1908 Sept. 23.	N.R.	Muzaffur Ali Khan Bahadur, Syed, Zemindar and Rais. *Jausath, Dist. Muzaffarnagar.*
1894 Sep. 27.	R.	Nagendra Nath Basu. 20, *Kentapuker Lane, Bagbazaar, Calcutta.*
1907 Jan. 2.	N.R.	Nasir Ali, Khan Bahadur, Mir, Superintendent, North India Salt Revenue. *Sultanpur Salt Works, Farrakhnagar, Gurgaon.*
1907 Jan. 2.	R.	Nasir Hosein Khan, S., Landholder. 32, *Ezra Street, Calcutta.*

Date of Election.		
1904 Dec. 7.	N.R.	Nathan, Robert, I.C.S., Commissioner, Dacca Division. *Dacca.*
1908 Feb. 5.	N.R.	Nesfield, Capt. Vincent Blumhardt, F.R.C.S., L.R.C.P., I.M.S., 2nd and 7th Gurkha Rifles. *Quetta.*
1901 Mar. 6.	N.R.	Nevill, Henry Rivers, I.C.S., Editor, District Gazetteers, United Provinces. *Allahabad.*
1889 Aug. 29.	L.M.	Nimmo, John Duncan, c/o Messrs. Walter Duncan & Co. 137, *West George Street, Glasgow.*
1887 May 4.	R.	Nobinchand Bural, Solicitor. 10, *Old Post Office Street, Calcutta.*
1906 Dec. 5.	N.R.	Norman, Henry Campbell, M.A. *Queen's College, Benares.*
1908 Feb. 5.	N.R.	Nott, Lieut.-Col. Arthur Holbrook, M.D., I.M.S. *Berhampur.*
1901 June 5.	R.	Nundolal Dey. *Chinsura.*
1900 Dec. 5.	N.R.	O'Connor, Major, William Frederick Travers, Royal Artillery, C.I.E. *Quetta.*
1906 Dec. 5.	A.	O'Kinealy, Major Frederick, M.R.C.S. (Eng.), L.R.C.P. (Lond.), I.M.S. *Europe.*
1905 May 3.	N.R.	Ollenbach, Alfred James, B.A., I.C.S. *Khondmals, Phulbani, Orissa.*
1905 Nov. 1.	N.R.	O'Malley, Lewis Sydney Steward, B.A., I.C.S., Superintendent, Imperial Gazetteer, Bengal. *Darjeeling.*
1892 Mar. 2.	L.M.	Ooday Pratab Singh, Raja, C.S.I., Raja of Bhinga. *Bhinga.*
1906 Aug. 1.	N.R.	Osburn, Captain, Arthur C., M.R.C.S., L.R.C.P., (Lond.), R.A.M.C. *Bhamo, Upper Burma.*
1908 Aug. 5.	R.	Owens, Capt. Terence Francis, I.M.S., Chemical Examiner to the Government of Bengal. *Calcutta.*
1907 July 3.	R.	Page, William Walter Keightley, Solicitor. 10, *Old Post Office Street, Calcutta.*
1892 Dec. 7.	R.	Panchanan Mukhopadhyaya. 45, *Bechoo Chatterji's Street, Calcutta.*
1907 Feb. 6.	R.	Panioty, Dr. John Emanuel, L.R.C.P. (Lond.), L.R.C.P. & S. (Ed.) 19, *Royd Street, Calcutta.*
1901 Aug. 28.	R.	Panton, Edward Brooks Henderson, B.A., I.C.S., District and Sessions Judge. 24-*Parganas. Calcutta.*
1899 Aug. 2.	R.	Peake, Charles William, M.A., Meteorological Reporter to the Government of Bengal. *Calcutta.*
1907 Dec. 4.	R.	Pearse, Thomas Frederick, M.D., F.R.C.S., M.R.C.P., D.P.H., Health Officer. *Calcutta.*

Date of Election.		
1906 Dec. 5.	R.	Peart, Captain Charles Lubé, 106*th Hazara Pioneers.* 4, *Park Street, Calcutta.*
1888 June 6.	L.M.	Pennell, Aubray Percival, B.A., Barrister-at-Law. *Rangoon.*
1881 Aug. 25.	R.	Percival, Hugh Melvile, M.A. 14, *Park Street, Calcutta.*
1877 Aug. 1	N.R.	Peters, Lieut.-Col. Charles Thomas, M.B., I.M.S. (retired). *Dinajpur.*
1906 April 4.	R.	Petrocochino, Leonidar. 231, *Lower Circular Road, Calcutta.*
1907 Feb. 6	N.R.	Petrie, David, Assistant Superintendent, Punjab Police. *Hungu.*
1900 May 2.	R.	Phani Bhusan Mukerji, B.SC. 57, *Jhowtola Road, Ballygunge, Calcutta.*
1908 Jan. 1.	R.	Pilgrim, Lieut.-Col. Herbert Wilson, M.B., F.R.C.S., I.M.S. *Presidency General Hospital, Calcutta.*
1889 Nov. 6.	F.M.	Phillott, Lieut.-Colonel Douglas Craven, 23rd Cavalry, F.F. *C/o Messrs. Grindlay & Co., 54, Parliament Street, London.*
1906 Mar. 7.	N.R	Phra Maha Chandima. 40, *Green Hall, Penang.*
1904 June 1.	R.	Pilgrim, Guy Ellcock, B.SC., F.G.S., Assistant Superintendent, Geological Survey of India. *Calcutta.*
1904 Mar. 4.	A.	Pim, Arthur W., I.C.S. *Europe.*
1906 May 2.	N.R.	Prabhat Chandra Borua, Raja. *Gauripur, Assam.*
1899 Aug. 29.	N.R.	Prabhu Narain Singh, Bahadur, H.H. The Maharaja Sir, G.C.I.E., Maharaja of Benares. *Ramnagar Fort, Benares.*
1907 Mar. 6.	R.	Prafulla Chundra Ghosh, M.A. 27/3, *Boitakhana Bazar Road, Calcutta.*
1890 Mar. 5.	R.	Prafulla Chandra Ray, D.SC., Professor, Presidency College. *Calcutta.*
1880 Nov. 3.	N.R.	Pramatha Nath Bose, B.SC., F.G.S. *Ranchi.*
1901 April 3.	R.	Pramatha Nath Mullick, Zemindar. 7, *Prasonno Kumar Tagore's Street, Calcutta.*
1887 May 4.	R.	Prasanna Kumar Ray, D.SC. (Lond. and Edin.). 7, *Ballygunge Circular Road, Calcutta.*
1869 Feb. 3.	N.R.	Pratapa Chandra Ghosha, B.A. *Vindyachal.*
1906 Aug. 1.	N.R	Price, Charles Stanley. *Victoria Boy's School, Kurseong.*
1898 April 6.	R.	Prodyat Coomar Tagore, Maharaja Sir, Kt. *Pathuriaghatta, Calcutta.*
1907 Sept. 25.	R.	Promode Prakas Chatterjee. 8, *Dixon Lane, Calcutta.*
1907 Jan. 2.	N.R.	Pulley, Lieut. Henry Cuthbert. 12*th Pioneers, Jhansi.*
1906 Mar. 7.	N.R.	Puran Chand Nahar. *Azimgunj, Murshidabad.*

Date of Election.		
1908 Mar. 4.	R.	Quinlan, Dr. D., United Service Club. *Calcutta.*
1877 Jan. 17.	N.R.	Radhakishor Dev Barman, H. H. The Maharaja. *Tipperah.*
1902 April 2.	R.	Rajchunder Chunder, Attorney-at-Law. 2, *Old Post Office Street, Calcutta.*
1902 Mar. 5.	R.	Rajendra Chandra Sastri, Rai Bahadur, M.A., Bengali Translator to the Government of Bengal. *Calcutta.*
1898 May 4.	R.	Rajendra Nath Mookerjee, 20, *Beadon Street, Calcutta.*
1907 Jan. 2.	N.R.	Rakhala Dasa Bandyopadhyaya. *Lucknow.*
1901 Jan. 2.	N.R.	Ramavatar Pande, B.A., I.C.S., District Judge. *Azimgarh.*
1893 May 3.	N.R.	Ram Chandra Bhanj Deb, Maharaja Sri, Chief of Maurbhanj. *Baripada P.O., Balasore.*
1889 Nov. 6.	N.R.	Rameshwara Singh Bahadur, H. H. The Hon. Maharaja, K.C.I.E. *Durbhanga.*
1889 Jan. 2.	R.	Ramessur Maliah, Kumar. 6, *Cullen Place, Howrah.*
1879 April 7.	N.R.	Ram Saran Das, Rai Bahadur, M.A., Manager, Oudh Commercial Bank, Ld. *Fyzabad.*
1908 Feb. 5.	N.R.	Randle, Herbert Neil, B.A., Muir Central College. *Allahabad.*
1908 July 1.	N.R.	Ranganathasvami Aryavaraguru, S. P. V., Arshya Library. *Vizagapatam.*
1905 Jan. 4.	F.M.	Rankin, James Thomas, I.C.S. *C/o Messrs. Grindlay & Co., Calcutta.*
1907 Aug. 7.	N.R	Ranking, Lieut. James, H. B. M.'s Consul for Arabistan. *Awaz, Persia.*
1904 Mar. 4.	F.M.	Rapson, E. J. *British Museum, London.*
1905 May 3.	R.	Richardson, The Hon. Mr. Justice Thomas William, I.C.S., Judge, High Court. *Calcutta.*
1908 Sept. 2	R.	Ridsdale, Rev. Arthur Cyril, *St. Thomas' Parsonage, Free School Street, Calcutta.*
1908 Feb. 5.	N.R.	Rigo-de-Riglie, Alceste Carlo. *Darjeeling.*
1884 Mar. 5.	R.	Risley, Sir Herbert Hope, B.A., C.I.E., K.C.I.E., I.C.S., Secretary, Government of India, Home Department. *Calcutta.*
1908 July 1.	R.	Ritchie, David Henry Wybrent. 16, *Strand Road, Calcutta.*
1907 Feb. 6.	A.	Robertson, Major George Alan, 15*th Lancers. Europe.*
1903 Mar. 4.	N.R.	Rogers, Charles Gilbert, F.L.S., F.C.H., Forest Department. *Port Blair, Andamans.*
1900 April 4.	R.	Rogers, Major Leonard, M.D., B.S., F.R.C.P., F.R.C.S., I.M.S. 47, *Park Street, Calcutta.*

Date of Election.		
1907 Mar. 6.	R.	Roormall Goenka. 57, *Burtolla Street, Calcutta.*
1900 Aug. 29.	N.R.	Rose, Horace Arthur, I.C.S., Superintendent, Gazetteer Revision, Punjab. *Multan.*
1901 Dec. 4.	R.	Ross, Dr. Edward Denison, PH.D., Assistant Secretary, Government of India, Home Dept., and Principal, Calcutta Madrassah. *Calcutta.*
1906 Feb. 7.	A.	Russell, Charles, M.A. *Europe.*
1908 Feb. 5.	N.R.	Russell, Robert Vam, I.C.S., Supdt. of Gazetteer and Ethnography. *Nagpur.*
1886 Mar. 3.	L.M.	Rustomjee Dhunjeebhoy Mehta, C.I.E. 55, *Canning Street, Calcutta.*
1906 May 2.	N.R.	Sakhawat Hosain, Maulavi, B.A., Inspector of Schools. *Meerut.*
1896 Aug. 27.	N.R.	Samman, Herbert Frederick, I.C.S., Offg. Deputy Commissioner, Sonthal Pargana. *Monghyr.*
1905 Mar. 1.	R.	Sanjib Chandra Sanial. 1, *Dihi Road, Calcutta.*
1905 Mar. 1.	N.R.	Sasi Bhusan Bose, M.A. *Ravenshaw College, Cuttack.*
1902 June 4.	R.	Satis Chandra Vidyabhusana, Mahamahopadhyaya, M.A., Ph.D. 26/1, *Kanilal Dhar's Lane, Calcutta.*
1908 Mar. 4.	R.	Satis Kumar Banerji. 45, *Baniatola Lane, Calcutta.*
1896 Mar. 4.	N.R.	Satish Chandra Banerji, Dr., M.A., LL.D., Advocate, High Court. *Allahabad.*
1902 Feb. 5.	R.	Schulten, Joseph Henry Charles, PH.D. 4, *Pollock Street, Calcutta.*
1900 Dec. 5.	N.R.	Schwaiger, Imre George, Expert in Indian Art. *Kashmir Gate, Delhi.*
1897 Dec. 1.	N.R.	Seth, Mesrovb J. *Bombay.* [*Ghazipore.*
1907 Aug. 7.	N.R.	Shah Munir Alam, B.A., LL.B. *Mainpura,*
1906 Dec. 5.	N.R.	Sharp, Henry, M.A., Director of Public Instruction, Eastern Bengal and Assam. *Shillong.*
1894 June 6.	N.R.	Shibli Nomani, Shams-ul-Ulama Maulavi. *Aligarh.*
1900 May 2.	R.	Shrager, Adolphe. 4, *Auckland Square, Rawdon Street, Calcutta.*
1908 Mar. 4.	R.	Shujaat Ali Khan Bahadur, Nasurul Mamalik Mirza, Acting Consul-General for Persia. 10, *Hungerford Street, Calcutta.*
1906 Mar. 7.	R.	Shyama Kumar Tagore, Kumar, Zemindar. 65, *Pathuriaghutta Street, Calcutta.*
1902 Feb. 5.	N.R.	Shyam Lal, Lala, M.A., LL.B., Deputy Collector. *Allahabad.*

Date of Election		
1894 Aug. 30.	R.	Sibnarayan Mukerjee. *Uttarpara, Bally.*
1899 May 3.	N.R.	Silberrad, Charles Arthur, B.A., B.SC., I.C.S. *Jhansi.*
1903 Aug. 26.	N.R.	Simpson, John Hope, I.C.S., Registrar of Co-operative Credit Societies, Upper Provinces. *Allahabad.*
1904 June 1.	R.	Simpson, Robert Rowell, B.SC., *Department of Mines. Calcutta.*
1898 Aug. 3.	N.R.	Sita Ram, B.A., Depy. Magistrate. *Dehra Dun.*
1872 Aug. 5.	N.R.	Skrefsrud, Revd. Laurentius Olavi, Secretary and Treasurer, Indian Home Mission to the Sonthals. *Benagerio, via Rampore Haut.*
1907 Dec. 4.	A.	Smith, Lieut.-Col. John Manners, Indian Army, V.C., C.I.E. *Europe.*
1907 Mar. 6.	N.R.	Sofiulla Saifududdin Ahmed, Maulavi, Sub-Deputy Collector. *Dibrugarh, Assam.*
1905 Mar. 1.	R.	Sorabji, Cornelia, Court of Wards. 6, *Camac Street, Calcutta.*
1901 Dec. 4.	N.R.	Spooner, David Brainerd, PH.D., Archæological Surveyor, North-West Frontier Province. *Peshawar.*
1907 Oct. 30.	N.R.	Sri Ram Dixit, Pandit, B.A., Secretary, Pratapgarh State. *Pratapgarh.*
1904 Sept. 28.	N.R	Stapleton, Henry Ernest, B.A., B.SC., Inspector of Schools. *Dacca.*
1901 Mar. 6.	N.R.	Stebbing, Edward Percy, F.E.S., F.Z.S., Imperial Forest Zoologist. *Dehra Dun.*
1908 Dec. 2.	R.	Steen, Capt. Hugh Barkley, M B., I.M.S., Resident Medical Officer, Eden Hospital. *Calcutta.*
1891 Aug. 27.	A.	Stein, Dr. Mark Aurel, PH.D. *Europe.*
1904 June 1.	R.	Stephen, The Hon'ble Mr. Justice Harry Lushington, Judge, High Court. *Calcutta.*
1899 Aug. 30.	A.	Stephen, St. John, B.A., LL.B., Barrister-at-Law. *Europe.*
1900 Aug. 29.	N.R.	Stephenson, Major John, I.M.S., Civil Surgeon. *Umballa City.*
1907 Dec. 4.	R.	Stevens, Major C. R., I.M.S., Medical College. *Calcutta.*
1907 June 5.	N.R.	Stewart, Capt. Francis Hugh, I.M.S., Medical Officer. *Gyantse, Tibet.*
1907 April 3.	A.	Stewart, Captain Hugh, Indian Army. *Europe.*
1906 Dec. 5.	N.R.	Stokes, Captain Claude Bayfield, Military Attaché. *Teheran, Persia.*
1904 July 6.	N.R.	Streatfield, Claude Arthur Cecil, I.C.S. *Jaunpur.*
1904 Jan. 6.	N.R.	Stuart, Louis, I.C.S. *Meerut.*
1906 Dec. 5.	R.	Subodh Chandra Mahalanobis, B.SC., F.R.S.E., F.R.M.S. 210, *Cornwallis Street, Calcutta.*
1905 Jan. 4.	R.	Sukumar Sen. 220, *Lower Circular Road, Calcutta.*

Date of Election.		
1908 June 3.	N.R.	Surendra Chandra Roy Chaudhauri, Zemindar. *Koondi, Rungpur.*
1906 June 6.	N.R.	Surendra Prasad Sanial, Sri, M.A., F C.S., Private Secretary to Raja Bahadur. *Majhauli.*
1908 Jan. 1.	N.R.	Suresh Chandra Ghatak, Depy. Magistrate and Depy. Collector. *Dacca.*
1907 June 5.	N.R.	Swinhoe Rodway Charles John, Solicitor. *Mandalay, Upper Burma.*
1900 July 4.	N.R.	Syam Sunder Das, B.A. *Benares City.*
1904 July 6.	N.R.	Talbot, Walter Stanley, I.C.S., Revenue Commissioner. *Kashmir, Srinagar.*
1893 Aug. 31.	N.R.	Tate, George Passman, Assistant Superintendent, Survey of India. *Dehra Dun.*
1907 June 5.	N.R.	Taylor, Dr. G. Orissa. *Chandraghona, Chittagong Hill Tracts, Chittagong.*
1878 June 5.	N.R.	Temple, Colonel Sir Richard Carnac, Bart., Indian Army, C.I.E. *C/o Messrs. King, King & Co., Bombay.*
1906 Dec. 5.	N R.	Tek Chand, Dewan, B.A., M.R.A.S., I.C.S., Deputy Commissioner. *Ludhianah.*
1875 June 2.	R.	Thibaut, G., PH.D., C.I.E., Registrar, Calcutta University. *Calcutta.*
1908 Nov. 4.	A.	Thornely, Capt. Michael Harris, I.M.S. *Europe.*
1898 Nov. 2.	A	Thornton, Edward, F.R.I.B.A. *Europe.*
1904 June 1.	R.	Tipper, George Howlett, M.A., F.G.S., Assistant Superintendent, Geological Survey of India. *Calcutta.*
1907 Feb. 6.	N.R.	Travers, Morris William, D.SC., F.R.S., Director of Indian Institute of Science. *Bangalore*
1861 June 5.	L.M.	Tremlett, James Dyer, M.A., I.C.S. (retired). *Dedham, Essex, England.*
1899 Aug. 30.	N.R.	Tribhuban Deb, Raja S., Feudatory Chief of Bamra. *Deogarh, Bamra.*
1897 Jan. 6.	N.R.	Tulsi Ram Misra, M.A. *Awagarh.*
1905 Jan. 4.	N.R	Turner, Frank, B.A. *Dacca Club, Dacca.*
1906 June 6.	R.	Umapati Datta Sharma, Pandeya. *Hare School, Calcutta.*
1908 Jan. 1.	R.	Upendra Nath Brahmachari, Dr., M.A., M.D. 10, *Nimtola Ghat Street, Calcutta.*
1905 Aug. 2.	A.	Urwin, Captain John Johnson, M.B., I.M.S. *Europe.*
1907 Aug. 7.	N.R.	Valavanur Subramania Iyer, Instructor, Imperial Forest School. *Dehra Dun.*
1905 July 5.	R.	Vanamali Chakravarti. *Sanskrit College, Calcutta.*

Date of Election.		
1900 Aug. 29.	R.	Vaughan, Major Joseph Charles Stoelke, I.M.S., Superintendent, Campbell Medical School and Hospital. *Calcutta.*
1890 Feb. 5.	N.R.	Venis, Arthur, M.A., Principal, Sanskrit College. *Benares.*
1894 Feb. 7.	N.R.	Vishwa Nath Singh, H. H. The Raja Bahadur. *Chhatturpur, Bundelkhund.*
1901 Mar. 6.	N.R.	Vogel, Jean Philippe, LITT. D., Archæological Surveyor, Punjab. *Lahore.*
1894 Sept. 27.	L.M.	Vost, Lieut.-Col. William, I.M.S., Civil Surgeon. *Muttra.*
1902 Oct. 29.	R	Vredenburg, Ernest, B.L., B.SC., A.R.S.M., A.R.C.S., F.G.S., Assistant Superintendent. Geological Survey of India. *Calcutta.*
1907 July 3	R.	Walker, Harold, A.R.C.S., F.G.S., A.M.INST.M., Assistant Superintendent, Geological Survey of India. *Calcutta.*
1900 Jan. 19.	R.	Wallace, David Robb. 9, *Clive Row, Calcutta.*
1901 June 5.	N.R.	Walsh, Ernest Herbert Cooper, I.C.S., Commissioner, Bhagalpur Division. *Bhagalpur.*
1900 April 4	N.R.	Walton, Captain Herbert James, M.B., F.R.C.S., I.M.S. *C/o Messrs. King Hamilton & Co., Calcutta.*
1905 Dec 6.	N.R.	Watson, Edwin Roy, M.A., B.SC. *Dacca.*
1902 April 2.	R.	Wheeler, Henry, I.C.S., Deputy Secretary, Government of India, Finance Dept. *Calcutta.*
1907 April 3.	N.R.	White, Lieut. Arthur Denham, M.B., B.S. (Lond.), I.M.S., Medical Officer. *Cooch Behar.*
1907 Feb. 6.	A.	White, Captain J. R., D.S.O., *Gordon Highlanders. Europe.*
1906 Sept. 19.	N.R.	Whitehead, Richard Bertram, I.C.S., Assistant Commissioner. *Delhi.*
1905 Dec. 6.	N.R.	Wilson, The Hon. Mr. James, M.A., C.S.I., I.C.S., Finance Commissioner. *Lahore.*
1904 Mar. 4.	R.	Wood, William Henry Arden, M.A., F.C.S., F.R.G.S., Principal, La Martiniere. *Calcutta.*
1906 July 4.	A.	Woodley, Rev. Edward Carruthers, M.A. *Europe.*
1900 Dec. 5.	N.R.	Woodman, Henry Charles, I.C.S., Offg. Magistrate and Collector. *Mozufferpore.*
1906 Mar. 7.	N.R.	Woolner, Alfred Cooper, M.A., Principal, Oriental College. *Lahore.*
1908 April 1.	R.	Wordsworth, William Christopher. 8, *Harington Street, Calcutta.*
1907 June 5.	R	Wright, Harold, A.M.I.C.E. *E. I. R. House, Calcutta.*

Date of Election.		
1894 Aug. 30.	N.R.	Wright, Henry Nelson, B.A., I.C.S., District Judge. *Fyzabad.*
1900 Mar. 7.	R.	Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha, Pandit. 59/3, *Harrison Road, Calcutta.*
1905 Mar. 1.	R.	Young, Rev. Arthur Willifer. 23, *Chowringhee Road, Calcutta.*
1906 June 6.	F.M.	Young, Mansel Charles Gambier, *Fawley Rectory, Henley-on-Thames, England.*

SPECIAL HONORARY CENTENARY MEMBERS.

Date of Election.	
1884 Jan. 15.	Dr. Ernst Haeckel, Professor in the University of Jena. *Prussia.*
1884 Jan. 15.	Charles Meldrum, Esq., C.M.G., M.A., LL.D., F.R.A.S., F.R.S. *Mauritius.*
1884 Jan. 15.	Revd. Professor A. H. Sayce, Professor of Assyriology, Queen's College. *Oxford, England.*
1884 Jan. 15.	Monsieur Émile Senart. 18, *Rue François Ier, Paris, France.*

HONORARY MEMBERS.

Date of Election.	
1848 Feb. 2.	Sir Joseph Dalton Hooker, G.C.S.I., C.B., M.D., F.R.S., D.C.L., LL.D., F.L.S., F.G.S., F.R.G.S. *Sunningdale, Berkshire, England.*
1879 June 4.	Dr. Albert Günther, M.A., M.D., PH.D., F.Z.S., F.R.S. 23, *Lichfield Road, Kew, Surrey, England.*
1879 June 4.	Dr. Jules Janssen. *Observataire d'Astronomie Physique de Paris, France.*
1879 June 4.	Professor P. Reynaud. *La Faculté des Lettres, Lyons, France.*
1883 Feb. 7.	Dr. Alfred Russell Wallace, LL.D., D.C.L., F.L.S., F.Z.S., F.R.S. *Curfe View, Parkstone, Dorset, England.*
1894 Mar. 7.	Mahāmāhopadhyāya Chandra Kanta Tarkalankara. 26, *Baranushee Ghose's Street, Calcutta.*
1894 Mar. 7.	Professor Theodor Noeldeke. *C/o Mr. Karl T. Trübner, Strassburg, Germany.*
1895 June 5.	Lord Rayleigh, M.A., D.C.L., D.SC., LL.D., PH.D., F.R.A.S., F.R.S. *Ferling Place, Witham, Essex, England.*
1895 June 5.	Charles H. Tawney, Esq., M.A., C.I.E. *C/o India Office, London.*

Date of Election.	
1896 Feb. 5.	Lord Lister, F.R.C.S., D.C.L., M.D., LL.D., D.SC., F.R.S., 12, *Park Crescent, Portland Place, London.*
1896 Feb. 5.	Professor Charles Rockwell Lanman. 9, *Farrar Street, Cambridge, Massachusetts, U.S. America.*
1899 Feb. 1.	Dr. Augustus Frederick Rudolf Hœrnle, PH.D., C.I.E. 8, *Northmoor Road, Oxford, England.*
1899 Dec. 6.	Professor Edwin Ray Lankester, M.A., LL.D., F.R.S. *British Museum (Nat. Hist.), Cromwell Road, London, S.W.*
1899 Dec. 6.	Sir George King, M.B., K.C.I.E., LL.D., F.L.S., F.R.S. I.M.S. (retired). *C/o Messrs. Grindlay & Co., 55, Parliament Street, London, S.W.*
1899 Dec. 6.	Professor Edward Burnett Tylor, D.C.L., LL.D., F.R.S. Keeper, University Museum. *Oxford, England.*
1899 Dec. 6.	Professor Edward Suess, PH.D., Professor of Geology in the University of Vienna.
1901 Mar. 6.	Professor John Wesley Judd, C.B., LL.D., F.R.S., F.G.S., Late Prof. of the Royal College of Science. 30, *Cumberland Road, Kew, England.*
1902 Nov. 5.	Monsieur René Zeiller. *Ingénieur en chef des Mines. École superieur des Mines, Paris.*
1904 Mar. 2.	Professor Hendrick Kern. *Utrecht, Holland.*
1904 Mar. 2.	Professor Ramkrishna Gopal Bhandarkar, C.I.E. *Poona.*
1904 Mar. 2.	Professor M. J. DeGoeje. *Leide, Holland.*
1904 Mar. 2.	Professor Ignaz Goldziher, PH.D., D.LITT., LL.D. *Budapest, Hungary.*
1904 Mar. 2.	Sir Charles Lyall, M.A., K.C.S.I., C.I.E., LL.D. 82, *Cornwall Gardens, London, S.W.*
1904 Mar. 2.	Sir William Ramsay, PH.D. (Tüb.), LL.D., SC.D. (Dubl.), F.C.S., F.I.C. *University College, Gower Street, London, W.C.*
1904 July 2.	Dr. George Abraham Grierson, PH.D., D.LITT., C.I.E., I.C.S. (retired). *Rothfarnham, Camberley, Surrey, England.*
1906 Mar. 7.	The Right Hon'ble Baron Curzon of Kedleston, M.A., D.C.L., F.R.S. 1, *Carlton House Terrace, London, S.W.*
1908 July 1.	Godwin-Austen, Lt.-Col. Henry Haversham, F.R.S., F.Z.S., F.R.G.S., Nore, Godalming, Surrey. *England.*
1908 July 1.	Treub, Prof. M., Director, Botanic Gardens, Buitenzorg. *Java.*
1908 July 1.	Irvine, William, I.C.S. (retired), Holliscraft, Castelnau, Barnes. *London.*
1908 July 1.	Oldenderg, Dr. H. The Univeresity, Gottingen. *Germany.*

ASSOCIATE MEMBERS.

Date of Election.	
1875 Dec. 1.	Revd. J. D. Bate. 15, *St. John's Church Road, Folkstone, Kent, England.*
1882 June 7.	Herbert Giles, Esq. *Europe.*
1884 Aug. 6.	F. Moore, Esq., F.L.S. *Claremont House, Avenue Road, Penge, Surrey, England.*
1885 Dec. 2.	Dr. A. Führer. *Europe.*
1886 Dec. 1.	Sri Sarat Chandra Das, Rai Bahadur, C.I.E. 32, *Creek Row, Calcutta.*
1892 April 6.	Acharyya Satyavrata Samasrami. 16-1, *Ghose's Lane, Calcutta.*
1892 Dec. 7.	Professor Paul Johannes Brühl. *Civil Engineering College, Sibpur, Howrah.*
1899 April 5.	Pandit Visnu Prasad Raj Bhandari. Chief Librarian, Bir Library. *Katmandu, Nepal.*
1899 Nov. 1.	Revd. E. Francotte, S.J. 10, *Park Street, Calcutta.*
1902 June 4.	Revd. A. H. Francke, Moravian Missionary. *Kyelang, Kangra District.*
1908 July 1.	Babu Dinesh Chandra Sen. 19, *Kantapuker Lane, Calcutta.*
1908 July 1.	Mahamahopadhaya Sudhakara Dvivedi. *Sanskrit College, Benares.*
1908 July 1.	Revd. Father J. Hoffmann, S.J. *Mauresa House, Ranchi.*

LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM INDIA THREE YEARS AND UPWARDS.*

* *Rule* 40.—After the lapse of three years from the date of a member leaving India, if no intimation of his wishes shall in the interval have been received by the Society, his name shall be removed from the List of Members.

The following members will be removed from the next Member List of the Society under the operation of the above Rule:—

James R. Drummond, Esq., I.C.S. (retired).
Sir Arthur Upton Fanshawe, C.S.I., K.C.I.E., I.C.S.
Major John Wemyss Grant, I.M.S.
J. N. Das, Esq.
Kavasjee Jamasjee Badshah, Esq., B.A., I.C.S.
Alexander Cochrane Logan, Esq., I.C.S.
Babu Shyam Sunder Das.
Mark Aurel Stein, Esq., PH.D.

LOSS OF MEMBERS DURING 1908.

By Retirement.

Edmund Pully Chapman, Esq., I.C.S.
John F. Duthie, Esq., B.A., F.L.S.
T. D. Edleston, Esq.
Lieut.-Col. Edward Christian Hare, I.M.S.
William Woodward Hornell, Esq., B.A.
Sir Edward FitzGerald Law, K.C.M.G., C.S.I.
Lieut.-Col. Sir Arthur Henry McMahon, K.C.I.E., C.S.I., C.I.E.
Rev. Alfred Henry Phillips.
Sir Thomas Raleigh, K.C.S.I.
Babu Saroda Charan Mitra, M.A., B.L.
C. Saunders, Esq.
Herbert A. Stark, Esq., B.A.
James Wyness, Esq., C.E.

By Death.

Ordinary Members.

Lieut. Ronald Elwood Bate, 27th Punjabis.
Dr. H. C. Garth.
F. Hewett, Esq., I.C.S. (retired).
Dr. Meerza Mohammad Masoom.
Lieut.-Col. Francis Samuel Peck, I.M.S.
Maharaja Sir Jotindra Mohan Tagore, K.C.S.I.

Life Members.

Sir Dietrich Brandis, K.C.I.E., PH.D., F.L.S., F.R.S.

Honorary Members.

Lt.-Col. Sir Richard Strachey, R.E., G.C.S.I., LL.D., F.R.S
Prof. F. Kielhorn, PH.D., LL.D., C.I.E.

Associate Members.

Revd. E. Lafont, C.I.E., S.J.
Rai Bahadur Ram Brahma Sanyal.

Under Rule 40.

Dr. William Roy Macdonald.
Babu Panna Lal.
Babu Parmeshwar Lall.
Montague Churchill Shaun, Esq.

The names of the following members have been removed from the List of Ordinary Members as they have now been elected Honorary Members:—

William Irvine, Esq., I.C.S. (retired).
Lt.-Col. Henry Haversham Godwin-Austen, F.R.S.

ELLIOTT GOLD MEDAL.

Recipients.

1893 Chandra Kanta Basu.
1895 Yati Bhusana Bhaduri, M.A.
1896 Jnan Saran Chakravarti, M.A.
1897 Sarasi Lal Sarkar, M.A.
1901 Sarasi Lal Sarkar, M.A.
1904 { Sarasi Lal Sarkar, M.A.
1904 { Surendra Nath Maitra, M.A.
1907 Akshoyakumar Mazumder.

BARCLAY MEMORIAL MEDAL.

Recipients.

1901 E. Ernest Green.
1903 Major Ronald Ross, F.R.C.S., C.B., C.I.E., F.R.S., I.M.S. (retired).
1905 Lieut.-Colonel D. D. Cunningham, F.R.S., C.I.E., I.M.S. (retired).
1907 Lieut.-Colonel Alfred William Alcock, M.B., LL.D., C.I.E., F.R.S.
1909. Lieut.-Colonel David Prain, M.A., M.B., LL.D., F.R.S., I.M.S. (retired).

[APPENDIX.]

ABSTRACT STATEMENTS

OF

RECEIPTS AND DISBURSEMENTS

OF THE

ASIATIC SOCIETY OF BENGAL

FOR

THE YEAR 1908.

1908.

STATEMENT
Asiatic Society

Dr.

To Establishment.

	Rs.	As.	P.	Rs.	As.	P.
Salaries	5,434	8	1			
Commission	538	10	1			
Pension	360	2	9			
Grain Compensation Allowance	267	11	0			
				6,600	15	11

To Contingencies.

Stationery	121	8	9		
Taxes	1,465	0	0		
Postage	641	15	9		
Freight	375	3	10		
Auditing	100	0	0		
Lights and Fans	272	6	0		
Insurance fee	187	8	0		
Petty repairs	126	11	0		
Miscellnaeous	523	6	7		
				3,813	11	11

To Library and Collections.

Books	3,241	7	9		
Binding	1,041	8	0		
				4,282	15	9

To Publications.

"Journal and Proceedings," and "Memoirs,"	7,506	3	0			
To printing charges of Circulars, &c. ...	344	1	3			
				7,850	4	3
Interest on Government Paper purchased ...				55	4	9
Paging of Manuscripts				206	0	0
Tibetan Catalogue				60	0	0
Microscopic Lamps				60	0	0
Safe-repairing				54	8	0
To Personal Account (written off and miscellaneous)				368	9	2

To Extraordinary Expenditure.

Royal Society's Scientific Catalogue ...	4,096	1	6			
125th Anniversary Entertainment Fund ...	31	13	9			
				4,127	15	3
Balance				1,89,731	7	0
Total Rs. ...				2,17,211	12	0

No. 1.
of Bengal. *1908.*

Cr.

By Balance from last report					Rs.	As.	P.
					1,81,836	15	6
By Cash Receipts.							
Publications sold for cash					1,120	3	1
Interest on Investments					6,765	8	0
Rent of room in the Society's premises ...					550	0	0
Allowance from Government of Bengal for the publication of papers on anthropological and cognate subjects					2,000	0	0
Allowance from Government of Eastern Bengal and Assam					1,000	0	0
Miscellaneous					83	0	3
					11,518	11	4
By Extraordinary Receipts.							
Subscriptions to Royal Society's Scientific Catalogue					8,803	0	0
Subscriptions to 125th Anniversary Entertainment Fund					800	0	0
					9,603	0	0
By Personal Account.							
Admission fees					1,760	0	0
Members' subscriptions					10,202	0	0
Subscriptions for the Societys' "Journal and Proceedings" and "Memoirs"					1,560	0	0
Sales on credit					568	6	0
Miscellaneous					162	11	2
					14,253	1	2
Total Rs. ...					2,17,211	12	0

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1908. Oriental Publication Fund, No. 1, in

Dr.

To Cash Expenditure.

			Rs.	As.	P.	Rs.	As.	P.
Salaries			1,651	14	5			
Commission on collection			26	5	6			
Editing charges			2,083	12	6			
Postage			128	10	3			
Freight			153	12	9			
Printing charges			4,306	2	0			
Stationery			17	15	2			
Contingencies			26	2	6			
Grain Compensation Allowance			60	10	9			
Servants' clothing			9	12	0			
Government Allowance			3,000	0	0			
						11,465	1	10
To Personal Account (written off and miscellaneous)			27	15	0			
	Balance		4,748	13	2			
	Total Rs. ...					16,241	14	0

STATEMENT

1908. Oriental Publication Fund, No. 2, in

Dr.

To Cash Expenditure.

			Rs.	As.	P.	Rs.	As.	P.
Printing charges			1,674	8	0			
	Balance		3,325	8	0			
	Total Rs. ...					5,000	0	0

No. 2.

Acct. with the Asiatic Soc. of Bengal. 1908.

Cr.

			Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report						5,109	4	3
By Cash Receipts.								
Government Allowance			9,000	0	0			
Publications sold for cash			900	4	0			
Advances recovered			56	4	6			
						9,956	8	6
By Personal Account.								
Sales on credit						1,176	1	3
Total Rs. ...						16,241	14	0

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

No. 3.

Acct. with the Asiatic Soc. of Bengal. 1908.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report				2,000	0	0
By Cash Receipts.						
Government Allowance				3,000	0	0
Total Rs. ...				5,000	0	0

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1908. Oriental Publication Fund, No. 3, in

Dr.

		Rs.	As.	P.	Rs.	As.	P.
To Balance					3,000	0	0
	TOTAL Rs. ...				3,000	0	0

STATEMENT

1908. Sanskrit Manuscript Fund in Acct.

Dr.

TO CASH EXPENDITURE.

	Rs.	As.	P.	Rs.	As.	P.
Salaries	1,530	11	9			
Travelling charges	381	15	0			
Postage	2	4	0			
Stationery	8	0	8			
Contingencies	46	0	3			
Purchase of Manuscripts	1,655	0	0			
Insurance fee	125	0	0			
Grain Compensation Allowance	48	10	9			
				3,797	10	5
Balance				2,718	12	9
TOTAL Rs. ...				6,516	7	2

No. 4.

Acct. with the Asiatic Soc. of Bengal. 1908.

Cr.

By Cash Receipt.

				Rs.	As.	P.	Rs. As. P.
Government Allowance	...	...	...				3,000 0 0
Total Rs.			...				3,000 0 0

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

No. 5.

with the Asiatic Society of Bengal. 1908.

Cr.

				Rs.	As.	P.	Rs. As. P.
By Balance from last Report	...	...	...				3,271 9 2
By Cash Receipts.							
Government Allowance	...	...		3,200	0	0	
Publications sold for cash	...	...		3	0	0	
Advances recovered ...	...	...		0	14	0	3,203 14 0
By Personal Account.							
Sales on credit	...	...	...	...			41 0 0
Total Rs.			...				6,516 7 2

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1908. Arabic and Persian MSS. Fund in

Dr.

To Cash Expenditure.

			Rs.	As.	P.	Rs.	As.	P.
Salaries			1,846	10	0			
Grain Compensation Allowance			16	8	0			
Purchase of Manuscripts			612	7	6			
Stationery			13	10	2			
Contingencies			67	9	3			
Postage			7	5	6			
Printing charges			18	4	0			
Insurance			31	4	0			
Freight			32	14	0			
Travelling charges			361	11	9			
						3,008	4	2
	Balance ...	...				145	4	7
	Total Rs.	...				3,153	8	9

STATEMENT

1908. Bardic Chronicles MSS. Fund in

Dr.

				Rs.	As.	P.	Rs.	As.	P.
To Balance ...	...	...	...	2,400	0	0			
	Total Rs.	...					2,400	0	0

No. 6.

Acct. with the Asiatic Soc. of Bengal. 1908.

Cr.

	Rs.	As.	P.	Rs.	As.	P.
By Balance from last Report				1,153	8	9
By Cash Receipts.						
Government Allowance				2,000	0	0
Total Rs. ...				3,153	8	9

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

No. 7.

Acct. with the Asiatic Soc. of Bengal. 1908.

Cr.

	Rs.	As.	P.	Rs.	A.	P.
By Balance from last Report				2,400	0	0
Total Rs. ...				2,400	0	0

D. Hooper,
Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1908. *Personal*

Dr.

		Rs.	As.	P.	Rs.	As.	P.
To Balance from last Report					4,090	5	3
To Cash Expenditure.							
Advances for purchase of Manuscripts, &c. ...					725	10	0
To Asiatic Society	...	14,253	1	2			
,, Oriental Publication Fund, No. 1	...	1,176	1	3			
,, Sanskrit Manuscript Fund ...	...	41	0	0			
					15,470	2	5
Total Rs. ..					20,286	1	8

STATEMENT

1908. *Invest-*

Dr.

	Value.			Cost.		
	Rs.	As.	P.	Rs.	As.	P.
To Balance from last Report ...	... 1,90,700	0	0	1,90,183	10	2
,, Purchase	... 8,000	0	0	7,709	5	10
Total Rs.	... 1,98,700	0	0	1,97,893	0	0

Funds.	Permanent Reserve.						Temporary Reserve.						Total Cost.		
	Value.			Cost.			Value.			Cost.					
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P	Rs.	A.	P.	Rs.	A.	P.
Asiatic Society ...	1,55,700	0	0	1,54,649	2	9	41,600	0	0	41,903	13	3	1,96,553	10	0
Trust Fund ...	1,400	0	0	1,339	6	0	...	...	...	...	...	..	1,339	6	0
Total Rs. ...	1,57,100	0	0	1,55,989	2	9	41,600	0	0	41,903	13	3	1,97,893	0	0

No. 8.

Account. *1908.*

Cr.

		Rs.	As.	P.	Rs.	As.	P.
By Cash Receipts	... ...	...			16,102	6	9
„ Asiatic Society	... ...	368	9	2			
„ Oriental Publication Fund, No. 1	...	27	15	0			
					396	8	2

By Balance.	Due to the Society.			Due by the Society.		
	Rs.	As.	P.	Rs.	As.	P.
Members ...	2,889	6	9	161	4	6
Employés ...	30	0	0	100	0	0
Sanskrit Manuscripts Fund	1,000	0	0	...	...	..
Miscellaneous	229	8	0	100	7	6
	4,148	14	9	361	12	0

	...	3,787	2 9
TOTAL Rs.	...	20,286	1 8

D. HOOPER,
Honorary Treasurer,
Asiatic Society of Bengal.

No. 9.

ment. *1908.*

Cr.

		Value.			Cost.		
		Rs.	As.	P.	Rs.	As.	P.
By Balance	... ...	1,98,700	0	0	1,97,893	0	0
TOTAL Rs.	...	1,98,700	0	0	1,97,893	0	0

D. HOOPER,
Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1908. *Trust*

Dr.

		Rs.	As.	P.
To Pension		48	0	0
Balance		1,463	11	10
TOTAL Rs. ...		1,511	11	10

STATEMENT

1908. *Cash*

Dr.

	Rs.	As.	P.
To Balance from last Report	2,960	2	1

RECEIPTS.

	Rs.	As.	P.
To Asiatic Society	21,121	11	4
„ Oriental Publication Fund, No. 1 ...	9,956	8	6
Do. do. No. 2 ...	3,000	0	0
Do. do. No. 3 ...	3,000	0	0
„ Sanskrit Manuscripts Fund	3,203	14	0
„ Arabic and Persian MSS. Fund ...	2,000	0	0
„ Personal Account	16,102	6	9
„ Trust Fund	49	0	0
	58,433	8	7
TOTAL Rs.	61,393	10	8

No. 10.

Fund. *1908.*

Cr.

		Rs.	As.	P.
By Balance from last Report		1,462	11	10
,, Interest on Investment		49	0	0
TOTAL Rs. ...		1,511	11	10

D. HOOPER,

Honorary Treasurer,
Asiatic Society of Bengal.

No. 11.

Account. *1908.*

Cr.

EXPENDITURE.

		Rs.	As.	P.	Rs.	As.	P.
By Asiatic Society		27,111	11	10			
,, Oriental Publication Fund, No. 1 ...		11,465	1	10			
,, Do. do. No. 2 ...		1,674	8	0			
,, Sanskrit Manuscripts Fund		3,797	10	5			
,, Arabic and Persian Mss. Fund ...		3,008	4	2			
,, Personal Account		725	10	0			
,, Investment		7,709	5	10			
,, Trust Fund		48	0	0			
		55,540	4	1			
Balance		5,853	6	7			
TOTAL Rs. ...					61,393	10	8

D. HOOPER,

Honorary Treasurer,
Asiatic Society of Bengal.

STATEMENT

1908. *Balance*

LIABILITIES.

			Rs.	As.	P.	Rs.	As. P.
Asiatic Society	...	...	1,89,731	7	0		
Oriental Publication Fund, No. 1 ..	...		4,748	13	2		
Do. do. No. 2...	...		3,325	8	0		
Do. do. No.3...	...		3,000	0	0		
Sanskrit Manuscripts Fund ...	...		2,718	12	9		
Arabic and Persian Manuscripts Fund	...		145	4	7		
Bardic Chronicles Manuscript Fund	...		2,400	0	0		
Trust Fund	...		1,463	11	10		
						2,07,533	9 4
TOTAL Rs.	...					2,07,533	9 4

We have examined the above Balance Sheet, and the appended detailed Accounts with the books and vouchers presented to us, and certify that it is in accordance therewith, correctly setting forth the position of the Society as at the 31st December, 1908.

CALCUTTA,
29th January, 1909.

MEUGENS, KING & SIMSON,
Chartered Accountants.
Auditors.

No. 12.

Sheet. *1908.*

ASSETS.

					Rs.	As.	P.	Rs. As. P.
Personal Account	...	...	...		3,787	2	9	
Investment ($3\frac{1}{2}$ % G. P. Notes, par value Rs. 1,98,700)	...	...	...		1,97,893	0	0	
Cash Account	...	...	...		5,853	6	7	
								2,07,533 9 4
Government Pro. Note at Bank of Bengal's Safe Custody Account Cashier's Security Deposit Rs. 500	...	...	...	...				...
TOTAL Rs.				...				2,07,533 9 4

D. HOOPER,

Honorary Treasurer,
Asiatic Society of Bengal.

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1909.

Issued 12th August, 1909.

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OF THE

ASIATIC SOCIETY OF BENGAL

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10. The Theory of Souls among the Malays of the Malay Peninsula.

By N. Annandale, D.Sc.

In an account of the religion and magic of the Malays of the Patani States published some years ago in *Fasciculi Malayanses* I dealt with the conceptions of the soul—human, vegetable, mineral and belonging to made objects—current among the professed Mahommedans of what is probably the most primitive part of the Malay Peninsula. Want of space prevented me from dwelling at length on certain aspects of these conceptions, and maturer deliberation, helped not a little by discussions with several friends, has led me to doubt whether the form in which I made certain statements expressed my views with sufficient clearness. As it seems that even those who have described and discussed the religion of primitive tribes in the most profound and detailed manner have often neglected to satisfy themselves as to what their informants meant by the words translated "soul" or "spirit," it may be worth while to recapitulate and discuss our knowledge on this point as regards a people very different from any in Europe if not in India, but yet, as men, resembling all mankind in their fundamental conceptions. My remarks will refer in particular to the Malays of the Peninsula to which they have given a name; but the beliefs of this section of the race—if the Malays can be called a race—agree in the main with those of their fellows in Java and Sumatra, who have attained, or perhaps rather preserved, a higher culture, together with a greater purity of blood. Had not I had frequent and peculiar opportunities of discussing such matters with ignorant natives of the country in their own dialect, I would have hesitated to approach the subject, for it is not one which can be attacked satisfactorily by diligence in reading. Many of its premises have not been recorded, although occasionally they may be deduced from the statements of travellers; Mr. W. W. Skeat's *Malay Magic* is often our only guide, and excellent as this treatise is, one wishes that its author had given more of his own in place of the lengthy quotations from literary essayists with which he fills so many of his pages. Philology can help us little, for the meanings of theological terms are seldom transferred with even that degree of accuracy which clings to their forms. It is easy to say that the Malay word "*rûh*" is Arabic, that *nyâwa* is probably Sanscrit, that "*bădi*" did not originate in Malaya; but the Arab theologian would hardly recognize the *rûh* in the

being which gets accidentally shut up in water jars and does not recognize its proper body should that body be ever so little disfigured in its absence during sleep. Such are the Malay's ideas about the *rûh*, which is said to be peculiar to man. The *nyâwa* is little more than the life breath of a man or animal; the *bădi* is an evil ghost or influence (quite definitely a ghost in the more primitive, less definitely individual in the more civilized districts) which originates from men and certain animals at or after an unlucky or violent death. It is some of these, nor even the inherent *tuah* or luck that belongs to certain objects and beings, that I wish to discuss at present; for it is difficult to say how far any one of these terms expresses an indigenous idea, or how far the new words have assumed primitive meanings. Differing from them very clearly is the *semăngăt*, which keeps a man, an animal, a crop, a mineral, a house, or a treasure-chest sane and healthy and preserves the body with which it is associated from rapid disorganization or decay.

Every man and every animal is believed to be pervaded by a *semăngăt*; every field of rice is similarly animated, the ore of every tin mine also has its "soul," and even houses and treasure-chests, as their different parts are fitted together into a perfect organism, develop an essence or pervading spirit of the kind. It is when the *semăngăt* is ousted that "possession" occurs.

The idea of possession is of course by no means peculiar to the Malays or even to the peoples of the Far East. Numerous instances of persons who were possessed are recorded in the New Testament; in Scotland cases, probably to some extent mimetic, occurred with tolerable frequency as late as, and even later than, the seventeenth century, and it is only a few years since the wife of an Irish peasant was put upon the fire by her relatives in order to drive out the fairy that was believed to be in her. In the Biblical examples of possession (except in that of the Gadarene swine) it is a person who is possessed; his body has been occupied by an alien spirit, which must be driven out of him before he can regain his sanity. It is needless to give other instances, which might be multiplied almost indefinitely, for other writers have dealt with the question. In India of course the belief is widely current.

According to Malay ideas the body possessed need not necessarily be that of a person or even of an animal. Just as in the stories of Scottish witchcraft, furniture and especially broomsticks become animate by the infusion of a temporary and evanescent life[1]; so to-day in Malaya men talk seriously of the

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[1] For a "philosophical" explanation see Mackenzie's *Treatise on Witchcraft* (1678), section xix. "It may be, I confess, that spirits and immaterial substances cannot touch things material, and conse-

dance of the fish-trap into which a sprit has "dived," or claim that their favourite medicine-man can summon a temporary life into a log of wood and cause it to leap through the air. A feeble survival, or perhaps rather imitation, of such practices is found in modern Europe and America among the spiritualists. According to the Malays, possession of one kind or another is quite a common occurrence. If a man quarrels with his wife, his *semăngăt* is weakened, he grows hysterical, he is possessed; the professional story-teller must become possessed before he (or more frequently she) can recite the tale; a patient suffering from small-pox is possessed; a magnet or a telegraph wire is possessed; the puppets in the shadow-play are possessed, and must be regarded as living actors. What then, according to Malay theory, does possession mean? The Malay answers, as he has frequently done to me, "The man, the thing, is affected by a spirit (*berhăntu*, literally "be-spirited"). Why does a man become possessed? "Because his soul (*semăngăt*) is weak, or soft, or sick," and a wandering spirit has entered into him, driving out his proper soul.

It is not clear how the human soul originates, and I do not think that the Malays of the present day, nominal Mohammadans as they are, have any definite theory on this point. It is sufficient for them that Tuhan Allah, the Lord God, sends the soul into the body of the child at the moment when the umbilical cord is severed, when the child first may be regarded as an independent being. There is even some evidence that they fear the consequence of scaring away the soul at this instant, implying that a definite spiritual entity already exists, waiting to take its place in the body at the appointed time. For this reason iron, which all spirits shun, may not be used in cutting the cord, lest the child, devoid of the sane and preserving influence, should become fever-stricken and delirious. This is the view held in Jalor, one of the small States of the Siamese provinces on the east coast of the Peninsula. Regarding the more civilized Federated Malay States there appears to be no evidence on this point. It is obvious, however, that the

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quently can neither raise nor transport them; but if we consider how the adamant raises and transports the iron, and how the soul of man, which is a spirit, can raise or transport the body, and that a man's voice, or a musical sound is able to occasion great and extraordinary motions in other men, we may easily conclude, that devils who are spirits of far more energy, may produce effects surpassing very far our understanding. And yet I do not deny but that the devil does sometimes persuade the witch that they are carried to places where they never were, making those impressions upon their spirits, and acquainting them what was done there, which is done by impressing images upon their brain, and which images are carried to the exterior senses by the animal spirits, even as we see the air carries the species of colours upon it, though in a very insensible way: and thus we see likewise, that the fumes of wine or melancholy will represent strange apparitions, and make us think them real."

conception of the sending of the soul into the child's body is not a primitive one but has been influenced by the teachers of Islam, if not of the other organized creeds which preceded the comparatively late introduction of Mohammadanism into Malaya. This is very clearly shown by ascertaining what is believed to be the process of development in the case of the soul of a made object, the gradual perfecting of which is more readily understood than the slow and hidden processes of embryology. It is extremely rare among primitive tribes to find definite statements as to existence of a definite soul in made objects; but I have little doubt that this only means that the question of the attribution of life to things which we regard as essentially inanimate is not one of the inquiries commonly set on foot. The Malays of Patani States (of which Jalor is one) certainly believe that houses, boats and treasure-chests have souls; and though their views are not so distinct regarding other made objects, they evidently see nothing ridiculous or impossible in the theory that every object has some kind of an essential spirit, provided only it has a form and even a simple organization. The nature of these thing souls I will discuss later, at present I am concerned with their origin. The soul of a house, *semăngăt rumah*, is said to come into being "of itself" as the planks or other materials of the structure are fitted together; there is no suggestion, however indirect, that Allah sends down the soul already perfect. The boat soul (which is not called *semăngăt* but *mayor*) is said to be in its nature very similar to that of a house. A striking illustration of its manner of development was given me by a man in Patani town, who explained that just as a steamer could not be regarded as a steamer until all its different parts had entered into it, so the boat soul could not be regarded as existing until the planks of the boat had been put together in their proper order. There again the phrase "it becomes of itself" was used, and, though the human soul is believed to be sent by Allah into the child, it too, by an inconsistency such as we must expect to find, is also said "to become of itself," in that it is not summoned by any human agent into its destined abode. In fact, it seems that it and its abode are really one, the very development of the material structure bringing about an essential regulating force, more or less clearly conceived of as a potentially independent being. Abstractions are difficult for untrained minds, and even Englishmen talk of the "electric fluid." Yet we find that the native tribes of Australia, perhaps the least cultured human beings whose beliefs are known to us in detail, have very definite and peculiar views regarding souls and their origin. We must remember, however, that the Australian beliefs have been studied in a manner affording evidence both more detailed and more reliable than that which anthropologists are forced to use regarding most other primitive religions.

The spirit, if spirit it be, which animates the puppets of the shadow play would appear to have quite a different origin from the souls of houses and boats, for it is called into the figures by a ceremony analogous to that by which the gods are invited to enter their images in many religions. Although I have good authority for stating that such a ceremony takes place, I can give no details, for the ceremony mentioned by Skeat as being of a propitiatory nature is a different one, performed as often as the puppets are used. It must be remembered in this connection that many of the figures[1] represented are drawn from the Hindu pantheon, *e.g.* those of Hanuman and Rama.

Regarding the souls of mineral ores I doubt whether the Malays conceive of them as being in an exact sense the equivalents of house-souls or boat-souls. They appear rather to be of the nature of guardian spirits of the mines; not permeating the ore itself, but protecting it and carrying it from place to place. They are far more often called *hăntu* than *semăngăt*, sometimes even *dēwa*. Spells are frequently recited in which the medicine-man hired by the mine-owner to conduct the necessary ceremonies threatens to reveal the origin of the metal or of its spirit; but he merely threatens, for if he knew the real origin of things he could coerce any spirit without the aid of further ritual. The following silver-charm from Kelantan, taken from *Malay Magic*, illustrates this tendency very clearly. It will be noted that the different guesses are not compatible with one another; but the man who first drew up the formula probably thought that one guess or another would be sufficiently near the truth to terrify the spirit into obedience. The Malays believe, as so many civilized and primitive races have done, that to know the origin of things gives a man great power, but they also believe that the possession of knowledge, especially imperfect knowledge, is dangerous. They think it quite enough, in order to subdue a spirit, to pretend to knowledge they do not seriously claim to possess, for if a man really knows the origin of any thing or being, he has that thing or being in his power and, unconscious of his own strength, may work havoc by some unguarded word. The charm begins in this way—I need not quote it all—

> Peace be with you, O child of the Solitary Silver Jin.
> I know your origin.
> You dwell upon the yellow clouds.
> Your place of penance is in the sea of Balongan Darah.
> Your place of penance is a pool of every river.
> Your place of becoming is in the bay of the dead winds, etc.[2]

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[1] Malay Magic, p. 2.

[2] I have not followed Skeat's translation exactly; see the Malay version *op. cit.*

As regards the belief that the mineral spirit is something external to the mineral, the following prayer may be quoted from the same authority, or rather that part of it which is a prayer pure and simple without any direct threat—

Assemble yourselves together, Rubbish and Trash,
House-lizards, "Kalerik," Centipedes and Millepedes [observe how any suggestion of the true name is avoided]
And partake of my banquet.
Let whosever comes bring me one.
A *kětong* or two,
A fistful or two,
and so on.

Both in the Patani States and in British Malaya the gold and the tin spirits are believed to be able to assume an animal form which has no obvious connection with the metal. If this animal be insulted or injured, the spirit carries the ore away.

Vegetable souls would seem to resemble thing souls rather than mineral spirits in their origin. They represent the growing and the ripening rice, are at once its essence, its strength and its vitality; each plant has not its individual soul, but all of one species growing in the same field share a soul in common. This is natural enough, for it is difficult for any agriculturist to look upon the individual plants in his crop as units. At harvest time the soul from the whole field is gathered together, as it were, into a special bunch of ears, in which it is preserved until the following season. There is not even a suggestion that it could exist apart from the rice, and any talk or threat about its origin which may occur in the charms is merely a pretence. It is thought in Jalor that if the rice-soul, or rather the ears in which it resides, were destroyed, then the whole of the grain in the bin with them would perish and be consumed.

Not even vegetable souls (of which the rice-soul is far the most distinct) have the same definite character as the souls of houses and boats. It is easy to see how a boat becomes an organism, but who has fathomed the secrets of vegetable growth?

Animal souls need not be considered apart from human souls, for the distinction between them is very slight. Every animal has a soul, although this is more frequently taken for granted than expressed, but the hunter addresses the soul of his quarry and deceives and cajoles it as he would any other spirit. As regards the origin of human souls, I have already told all I know, nor can I find any definite statements on this point in literature. Here again we may have the medicine-man's threats and sham revelations, unmeaning save occasionally, as referring to some obscure legend, which may be either local, Mahommadan or Hindu.

The question next arises, If the origin of souls is obscure to the Malay, is their nature any clearer to him? On the whole it is. In the first place, we can state definitely that the

soul is not the life. It is true that when the soul has forsaken a treasure-chest, that chest is said to have "become a dead thing"; but a treasure-chest, even with its soul, would never be called a "living thing," though the phrase would be quite possible in Malay as applied to an object really animate. A man does not die when his soul is taken from him.

One of the chief difficulties in the investigations on which this discussion is based has been the poverty of the Malay language as regards general and abstract terms and the dislike felt by all Malays for direct speech. Malay is a language apt for irony and metaphor, rich in specific, destitute of generic terms. No attempt to get from a Malay anything of the nature of a scientific definition, even on a point on which his mind is absolutely clear, is therefore possible, and it is chiefly by means of the illustrations in which his conversation is often rich that a definite conception of his ideas can be obtained. The richness of the language in specific terms, however, limits the application of each, and I think I am justified in saying that two things called by the same name are always regarded as being at least very intimately related to one another. Name and form may not have played quite the same part in the conceptions of the Malays as has been the case in some oriental systems of philosophy, but certainly the names of things, as well as their forms, are regarded as being almost essential qualities. A Malay (as I have often noted when asking questions about different animals) sees nothing ridiculous in the assertion that, say, two different breeds of cattle are different, because their names are not the same. We may assume that the *semăngăt* of a house has certain qualities in common with the *semăngăt* of a man, while the fact that the boat-soul is called *mayor prahu* shows that it is not in all respects the equivalent of the house-soul. Fishermen and seamen all the world over, however, have beliefs and phrases peculiar to themselves, that is to say differing from those of their compatriots who do not leave dry land. The boat-soul has the capacity (which the house-soul apparently lacks) of rendering itself visible, and in a form which has not always a very close relationship to that of its body. Indeed, it would almost appear that the boat-soul is merely a manifestation or perhaps rather a fragment, of the spirit of the sea (Hantu Laut), except when it has not become anthropomorphic, as there is a tendency for spirits to become in all religions. It is natural for a man to picture in his own image any being with whom he deems it possible to hold intercourse of any kind. Among the Patani Malays the soul of a canoe manifests itself in the likeness of a glow-worm, while the spirit of the sea sits on the mast-head as a flame of fire. A larger boat has a soul like a snake, that is to say more like the boat itself. It is worthy of note that on the coast of Kelantan, which marches with the

Patani States to the south, the rest on which the mast of the fishing-boats is supported when not in use projects from one side of the fishing-boats in the form of a slightly conventionalized cobra with expanded hood; but at Patani itself this rest, being of a more elaborate nature, more often takes the form of a bird, occasionally of a dragon's head (*kăpāla nāga*). The soul of a ship is said to appear in the guise of a man or a woman according to the ship's sex, which can only be proved by experience of *her* qualities. To British seamen all ships are feminine, but to the Malays the duality of the sexes is obvious not only in the animal and vegetable worlds, but even in the phenomena of nature and the products of art. They talk not only of male and female ears of rice, but of male and female winds and rain, of male and female rapids and waterfalls, of male and female ships. Female objects are, speaking generally, fat, abundant, or luxuriant, female phenomena slow in action, while the male equivalents have opposite qualities. It is interesting that the souls of boats partake of the sexes of their bodies. The souls of all boats occasionally manifest their presence by making a sound.

Though the house-soul does not "give itself to be seen" it also produces a sound, in fact the curious creaking heard at night to a greater or less extent in most Malayan houses. I am not aware that the soul of a treasure-chest manifests itself in any visible or audible form; its absence is proved by the ill-luck of the owner of the chest. Strength of the soul of a house or boat, conversely, means good luck to the master, and it is only when a soul is strong that any manifestation is possible. From this belief arises a peculiar form of what may be almost described as Sabbatarianism. Malays in Patani town are chary of opening the boxes in which they keep their valuables on a Friday, for Friday, as in many parts of India, is the one day of the week on which all spirits are most vigorous. Were the boxes opened on Friday, their souls (which are thus regarded as spirits) might be so active that they would escape, and then the owner of the box, having lost his luck, would become "utterly poor." Similarly it is on Friday that offerings to strengthen the boat-soul and so bring good luck in fishing are generally made. On this day the soul is apparently more ready to detach itself from its material body, and consequently more able to assimilate external nourishment.

Such things, however, do not form part of what we may regard as the proper functions of a soul, but rather illustrate the manner in which all matters regarding spirits tend to become questions of human luck. Primitive races, having acquired a belief in souls, tend, as we see in so many instances, to argue that not only their own souls but those of their possessions play an important part in their fate: unless all souls in which they have an interest are healthy, general misfortune will befall them.

11. The drug Astukhudus, nowadays *Lavandula dentata*, and not *Lavandula Stœchas*.

By I. H. Burkill.

The word Astukhudus is derived from the Greek word στιχάς or στοιχάς through its genitive στιχάδος or στοιχάδος. All books identify στοιχάς as *Lavandula Stœchas*, Linn.; but the drug which comes into India in some quantity is nowadays *Lavandula dentata*, Linn.

Lavandula Stœchas is found in the Canaries, Madeira and Portugal, Spain, very generally, France bordering the Mediterranean, Corsica, often in sheets, Sardinia, Italy in the south, North Africa, Greece and her islands, not uncommonly, Turkey at Byzantium, Bithynia and Lycia if not elsewhere in western Asia Minor, Syria, and Palestine, where it is common up to 3,900 feet.

Lavandula dentata is found in the Cape Verde Islands, Madeira, Morocco, Algeria, Tunis, central and south-eastern parts of Spain, *i.e.*, Andalusia, Granada, Murcia and Valencia, South Italy with Sicily, and Malta. In the south of Italy it is doubtfully endemic, and is generally seen in gardens. It is also recorded (teste Halacsy, *Conspectus Floræ Græcæ*, ii., 1902, p. 568) as found in Zante, but is there probably not a native.

The medicinal properties of these two Lavandulas have not been closely studied, certainly not so as to show if they are equally useful as drugs; and once only, as far as I am aware, have their essential oils been compared. This was done by the firm of Messrs. Schimmel & Co., and the result recorded in their Report for 1889, whence it is quoted by Sawyer (*Odorographia*, 1892, p. 355) and Gildermeister and Hoffmann (*The Volatile Oils*, translated by Kremers, Madison, 1900, p. 611). The difference between the two was found to be :—

	L. Stœchas.	*L. dentata.*
Specific gravity at 15°C	·942	·926
boiling at	180°C to 245°C	170°C to 200°C

They both smell like a mixture of rosemary with camphor, and are quite unlike the fragrant lavender oil from *Lavandula Spica*. in this as well as in having a lower specific gravity.

That part of the oil of *Lavandula Stœchas* which boils off first, seems to be chemically very similar to, if not identical with, the oil of *Lavandula dentata*.

The supposition which we may make that they are equally useful as drugs is backed up by one piece of information which

Sawyer (*loc. cit.*) gives to us : it is that both are used alike in Spain for the rough manufacture of an oil which serves as a balm for wounds.

The drug *stœchas* would seem to have been familiar in Italy in the days of the first Cæsars ; for the writers on medicine mention it without comment on its appearance and origin. Celsus, who lived in the times of Augustus and Tiberius, in his *De Medicina*, lib., viii., cap. ix, gives one use for it : Pliny (23—79 A.D.) another.

But Dioscorides, the Cilician, takes the trouble to describe it, and gives its origin as far away from his own home in the Islands off the French coasts near Hyères. This is what he says :—"*stœchas* grows in the islands of Gaul called Stœchades, situated on the coasts of Marseilles, and gets its name thence. It is a herb with slender spikes, with a foliage like thyme (*i.e.*, *Thymus vulgaris*, Linn.), but has the leaves longer ; it is pungent in taste, and in a measure rather bitter." There is no reason to believe that he had not *Lavandula Stœchas* in mind, but one asks how it comes that he records the origin of a plant as southern France which must have been common in his own native Cilicia.[1]

The writers of all the schools of medicine round the Mediterranean that come in the next centuries, were obviously familiar with *stœchas* : for instance, Galen (130 to about 200 A.D.) names it : Paulus Ægineta, who lived both in Rome and Alexandria (before 640 A.D.) names it. Then we find the Arabs writing of it. Mesues [2] is said to mention it (teste Bodaeus à Stapel in his *Theophrasti Historia plantarum libri decem. Textum græcum illustravit Johannaeus Bodaeus*, 1644, p. 670). Ibn Sina mentions it. Assuredly it was through Arabs of their schools that the use spread towards India.

I have not discovered any references which enable me to indicate when its use in India began.

It is not to be expected that the old Sanskrit medical works of India would mention Astukhudus by a name so obviously newer than they : apparently they do not mention it at all. As far as one can tell they had not got the drug.

Ibn Sina, who flourished about A.D. 1000, names our drug

[1] I find it profitless in the present enquiry to pursue the suggestion that Lavandula was known to the Greeks by the name of Ἴφυον. Ἴφυον is mentioned by Theophastus, Aristophanes and in the Orphica, but no author mentions it as a drug; and therefore the identification, however elaborately supported, can afford no evidence that Lavandula was used medicinally by the Greeks before Dioscorides.

[2] Mesues, the younger, a Christian of Maridin on the Euphrates, and student at Bagdad, put many works into Arabic. Schelenz, Geschichte der Pharmazie, 1904, p. 279, gives the date of his death as 1015. Mesues, the elder, lived not much more before the younger : for him von Haller's Bibliographia Medica, p. 174, and Schelenz's work may be referred to. Von Haller questions if the two were not one.

as اسطیقوس or اسطادوس (Astikus or Astadus). The name which the Greeks wrote "Stichas" had, it is seen, become but little distorted when Ibn Sina wrote "Astikus," but it must have been much in people's mouths to have since become so much further distorted as to be altered in India to "Astukhudus."

The Makhzan-el-Adwiya, written about 1709, by the Khorasan physician Mir Mohammed Hosein, who lived first in Shiraz and then in Murshidabad, Bengal, contains mention of it as اسطوخودس Astukhudus. He praises the drug greatly, gives it as useful for all sorts of ills: especially is it the cleanser of the brain; but he does not state its origin.

All the modern Urdu books on medicine mention it. This, its favour, among the people whose ancestors either entered India or became most changed in ways during the Mohammedan conquest, suggests that its use came in with the invaders. It has not reached Burma yet.

The dried flowers of a lavender under the name of "Flores Stœchados" or "Stœchas Arabica" were sold in the French and English drug shops all through the Middle Ages, and as Flückiger and Hanbury tell us (Pharmacographia, ed. 2, 1879, p. 730) had a place in the London Pharmacopœia until 1746. France seemed to share with the Levant the trade in the commodity. Bodæus à Stapel (*loc. cit.*) says very positively that the chief supply came from Alexandria, together with other merchandise, and that in consequence the name *Stœchas arabica* was used, but he adds the best of the drug comes from the islands of Hyères. He and all the more knowledgeable writers of his time knew well that *stœchas* grew for one place in southern France. He says so: thus "Certum etiam est in Gallia narbonensi copiose crescere." Ray (*Historia plantarum*, 1686, lib. xi, cap. 3) had himself seen it growing between Montpellier and Arles: Clusius earlier had recorded it as most abundant in parts of Spain. *Lavandula dentata* Clusius had found on the top of Gibraltar about 1570: he described it as something new, called by the Portuguese "Alichrin frances" or "French rosemary," and suggested that it probably possesses the same properties as *L. stœchas*; but these he had not ascertained.

Ray, enumerating all the species of *stœchas* known to him, cites:—

> *L. stœchas* as "Stœchas arabica vulgo dicta....Cassidony or French Lavender, by some Sticadore" and
> *L. dentata* as "Stœchas folio serrato....Crispo folio.... Cassidony or Sticadore with indented leaves."

I mention this as showing that a careful student saw the great resemblance between the two, the confusion of which we are now disentangling.

Ibn Sina would surely mean the plant of the Levant when writing. Persia and Turkestan in his time would probably get their supplies of it thence, *i.e.*, from Damascus *viâ* Mesopotamia, and then some might pass on eastwards to India through the caravan routes coming to Multan and Peshawar.

Near these routes other plants have been substituted for it in recent times, perhaps in the beginning as the caravan trade waned. Thus Baden Powell records that *Prunella vulgaris* was sold for it in Kashmir; and Dymock, Warden and Hooper (*Pharmacographia Indica*, Appendix, p. 193) say that they received from Afghanistan as Astukhudus the flowering top of a Labiate appearing to be a *Molucella*.

With the growth of the overseas trade of India and the decay of these caravan routes, Astukhudus has begun to come into India by sea, and what is imported thus is no longer *L. Stœchas*, but is *L. dentata*. It comes into Bombay; and down the Bombay Presidency it goes by the name of Alphajan rather more than by the name of Astukhudus. This word Alphajan is apparently derived, either as Dymock, Warder, and Hooper tell us, from the Portuguese name of *Lavandula Spica*[1] "Alfazema," or more likely from the name "Alichrin," which Clusius applied, as we have seen, to the very plant itself.

The exact source of this supply which Bombay gets is at present unknown to me: I regret that I have not as yet been able to trace it out.

I have made enquiries regarding the drug in Southern Persia and learn by the kindness of Major P. Z. Cox that Astukhudus in the Shiraz bazaars is *L. dentata* and is brought *viâ* Jiddah and Bushire. Shiraz, it has been seen, was the place where Mir Mohammed Husein lived a century and three quarters ago. His supply probably came from Syria over land; and there is still a belief current in Shiraz that Astukhudus comes thence.

I had a kind reply in answer to a letter which I addressed to Dr. Heckel of Marseilles, telling me that the Isle of Hyéres does not now send the drug into the market.

The first European writer to name *Lavandula Stœchas* as an Indian drug was Sir William O'Shaughnessy, who in the *Bengal Dispensatory and Pharmacopœia*, 1841, p. 489, spoke of it as much prized by the Arabs. Irvine, in his *Short Account of the Materia Medica of Patna*, 1848, p. 79, mentioned it as sold at Rs. 3-12-0 per lb. Birdwood, in his *Catalogue of the Vegetable Products of the Presidency of Bombay*, 1862, p. 63, named it: Dymock (*Vegetable Materia Medica of Western India*, second edition, 1885, p. 618) followed him, but with more details, giving the Bombay price at about 3½ annas per lb. There is an extraordinary difference between the Patna price of 1848 and the Bombay price of 1890.

[1] *Vide* Brotero, Flora Lusitanica, 1804, i., p. 171.

The next and most important contribution to the literature is Dymock, Warden and Hooper's *Pharmacographia indica*, 1892, v, p. 93, from which I have already quoted. Baden Powell, in the same year (*Indian Forester*, xviii, p. 53) recorded the substitution of *Prunella vulgaris* for it.[1] Anglo-Indian literature to the present date contains no more references to it.

[1] Honigberger, *Thirty-five Years in the East*, 1852, ii., pp. 350 and 351, mentions "Stœchas Cashmereana"—probably meaning *Prunella vulgaris*.

12. On Coptis.

By I. H. Burkill.

This paper contains notes made on Coptis in an attempt to trace the drug as found in India to its several sources : the work is not yet complete, though considerably advanced.

The genus Coptis is quite a small one. The whole list of names within it amounting to thirteen only, and of these, two certainly must be reduced.

The following are all the names :—

C. anemonaefolia, Sieb. et Zucc. in Abh. Math. Phys. Kl. Muench., iv, pt. 2 (1843), p. 130.—Japan.

C. asplenifolia, Salisb. in Trans. Linn. Soc., viii (1807), p. 306—Alaska.

C. brachypetala, Sieb. et Zucc., loc. cit.—Japan.

C. chinensis, Franchet in Journ. de Bot. (1897), p. 231.—China.

C. japonica, Makino in Bot. Mag. Tokyo (1899), p. 198.—Japan.

C. laciniata, Gray in Bot. Gazette, xii (1887), p. 297.—Western Oregon and California.

C. occidentalis, Torr. et Gray, Flora N. Amer., i (1838), p. 28.—Western N. America and, according to Franchet, Ochotsk.

C. orientalis, Maxim. in Bull. Acad. Petersb., xii (1868), p. 60.—Japan.

C. ospriocarpa, Brühl in Ann. Bot. Gard. Calc., v (1896), p. 89.—Sikkim Himalaya.

C. quinquefolia, Miq. in Ann. Mus. Bot. Lugd. Bat., iii, p. 7.—Japan.

C. Teeta, Wall. in Linnæa, xii (1838), Litt. 227.—Hills to N.-E. of Assam.

C. trifolia, Salisb. in Trans. Linn. Soc., viii (1807), p. 305.—Norway, Russia, N. Asia and N. America.

C. venosa, Howell, Flora N.-W. Amer. (1897), p. 21.

The genus, it will be noticed, is found on either side of the northern Pacific, and one species is almost circumpolar. The species all live in damp places ; they occur either in mossy swamps, or among rocks, or under trees : and they are all very much alike. *Coptis trifolia* has been known to European botanists from early days, its medicinal value having attracted attention. On the colonisation of North America the red Indians were found to use it, and the first books on medicine that the New World produced contained mention of its virtues : Bigelow (Medical Botany, iii, 1817, p. 60) says that it used to be sold in

Boston more abundantly than any other indigenous drug. It was a yellow dye of the red Indian, as well as a medicine. *Coptis trifolia* has naturally been more studied than any other species, and the rest of the American species more than the rest of the Asiatic species. It is not necessary for me to refer to their literature so far as it is purely botanic ; but I must do so in regard to the Asiatic species, which really are little known, and of which more specimens are greatly needed in Herbaria. Franchet in 1897 wrote a paper on these Asiatic species which was published in the *Journal de Botanique*, wherein he kept them all separate: Huth wrote a second one in the *Bulletin de l'Herbier Boissier*, v, p. 1085: and Finet and Gagnepain have subsequently written about the genus. The last paper was published in the *Bulletin de la Société botanique de France*, li, 1904, p. 401, and is reprinted as part of their *Contributions á la Flore de l'Asie orientale*, i, 1905, p. 144. They reduce the number of species, of Coptis, placing as varieties under *Coptis Teeta* both *C. anemonæfolia*, Sieb. et Zucc. (with *C. orientalis*, Maxim.), and *C. chinensis*, Franchet.

	Franchet's view.	Huth's view.	Finet & Gagnepain's view.
C. trifolia ..	distinct	distinct	distinct
C. quinquefolia ..	distinct	distinct	distinct
C. brachypetala ..	distinct	distinct	distinct
C. anemonæfolia ..	distinct	distinct	a variety of *C. Teeta.*
C. orientalis ..	distinct	distinct but very near the last	the same as the last.
C. Teeta ..	distinct	..	distinct
C. chinensis ..	distinct	..	a variety of *C. Teeta.*
C. laciniata ..	very near to the American *C. occidentalis.*	..	not mentioned.
C. asplenifolia ..	..	..	added doubtfully to the Japanese species.

The roots of the Chinese and Japanese species are possibly most used medicinally ; but we do not know their relative values. We have it on record that roots of *C. anemonæfolia* are

in the Japanese market as a drug; for Schaer in 1875 so described it as a Japanese drug (fide Just's Jabresbericht, 1875, p. 967), and Holmes reporting on a collection of Chinese drugs made by Thomas Christy, in the *Pharmaceutical Journal*, 1879-80, p. 23, confirmed the statement, as well as did Christy himself, who in his *New Commercial Drugs*, No. 4, 1884, p. 53, merely copied without comment what Holmes had to say. It looks as if Christy and Holmes had together determined the drug as *C. anemonæfolia*.

We have in India two sources for the root. We receive it at Sadiya from the Mishmis in neat little wicker baskets, and we receive it also by sea from China,—not in one form only, but, as Dymock remarks (Vegetable Materia Medica of Western India, second edition, 1885, p. 19), in two forms. We thus have in India three kinds of the roots of Coptis.

The origin of the Mishmi Tita[1] has been established by obtaining living roots for cultivation in India: the origin of the two roots from Chinese ports is not yet clearly established: one may be Japanese, and from *C. anemonæfolia*: the other is probably Chinese. It is known that Coptis is cultivated in parts of China, but it is not known if the whole of the Chinese supply of the drug is from cultivated plants, or partly from wild and partly from cultivated plants.

I propose first to give an account of the plant in the Mishmi hills, and thereafter to consider it as grown further east.

No one has ever penetrated quite far enough into the Mishmi country to reach those parts where Tita is grown, but Griffith in 1836 approached them. He says that *Coptis Teeta* is found on high hills on which there was then (November 14th) snow: that it was cultivated near Khosha's "native place" (place not recorded, but somewhere not far in the hills north of Sadiya), that its flower-buds were just forming on November 14th; that the Mishmis knew nothing about the period of its flowering, as they told him that it flowered in the rains at the same time as the Dhak flowers in Assam, whereas it was forming flowers in November: which remarks I interpret as meaning Tita is found wild at considerable elevations where it flowers during the rains, and is also cultivated by the Mishmis at lower elevations, where it flowers earlier than at the higher elevations.

Living roots have been thrice brought into cultivation in India through the agency of native collectors. Firstly in 1836 Lieutenant Charlton of Sadiya obtained some for Wallich, and they were set out to grow at Shibpur, Calcutta, by the latter who hoped notwithstanding their origin from colder regions to acclimatise them in the Honourable Company's garden. It is

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[1] With the use of the name Mamira or Mamiran sometimes ascribed to *Coptis Teeta*, and with the various plants so called, I propose to deal at another time.

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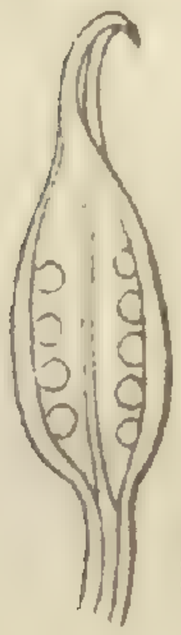

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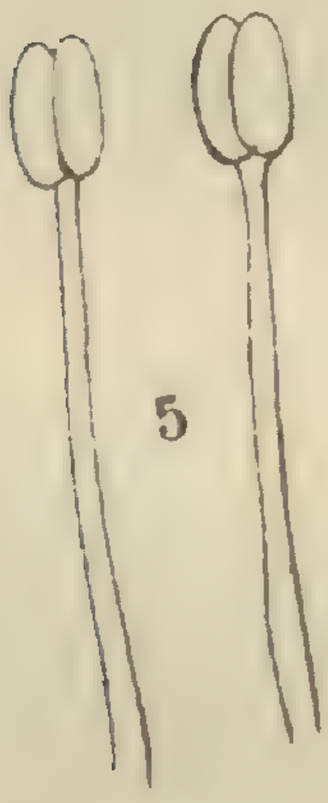

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Figs. 1-8.—Analyses of *Coptis Teeta*, drawn from specimens grown in Darjeeling. Fig. 1.—Inflorescence, × 2. Fig. 2. A flower showing nectaries. Fig. 3.—A carpel opened. Fig. 4.—A sepal. Fig. 5.—Stamens. Fig. 6.—A carpel from outside. Fig. 7.—Ovaries almost mature, showing that the inner ones are sterile. Fig. 8.—Section through the centre of 7.

probable that they soon died. Secondly in 1877 they were obtained by the then Deputy Commissioner of Lakhimpur and grown successfully at Shillong by Gustav Mann. Lastly in 1907 Mr. Noel Williamson, Assistant Political Officer at Sadiya, at my instance, was so good as to get a new consignment. Part of it I tried to cultivate in my own garden in Calcutta, but without success; and part of it I made over to Captain A. T. Gage for cultivation in the Lloyd Botanic Garden at Darjeeling. The curators of that garden, Messrs. Cave and Kennedy, have been very successful with the plant, and the opposite figures were drawn partly from spirit material preserved by them for me and partly by Miss G. Morrison from fresh specimens.

The material upon which my study is based has been :—

(1) Wallich's account of the plant in the *Transactions of the Medical and Physical Society of Calcutta*, viii, 1836, pp. 85—91.

(2) Griffith's notes, printed in *Posthumous Papers—Private Journals*, 1847, p. 37, and *Notulæ*, p. 733, together with the drawing in his *Icones Plantarum Asiaticarum*, iv, 1852, plate dclv. ii.

(3) Huth's remarks in Engler's *Botanische Jahrbücher*, xvi, 1893, p. 278, giving the result of a re-examination of Griffith's material.

(4) Brühl's figure in the *Annals of the Royal Botanic Garden, Calcutta*, v, 1896, pt. 2, p. 89, plate 114, based on dried specimens from Mann's garden, and also a dried specimen somehow obtained by Jenkins in 1845.

(5) The new material from Darjeeling.

The first thing to remark is that Huth has separated off a variety *Griffithii*, on the ground that Griffith's plant had broad thin petals, and thereby differs from the typical plant with thick narrow petals.

The figure below (fig. 9) is from Griffith's drawing. I am

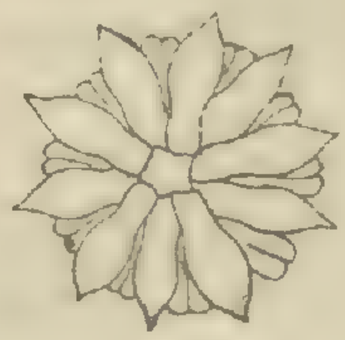

Fig. 9.—Flower seen from below, according to Griffith.

not inclined to admit the validity of this variety, for I find in the plants raised at Darjeeling variability enough to indicate that the petals may at times broaden from their usual condition into the state that Griffith observed. And we know that such variability is quite usual in the Ranunculaceæ.

A transverse section of a typical petal of a flower from Darjeeling is given in figure 10 to show how much of the surface the nectary occupies. Attention may here be drawn to the little sharp conical cells that stud it.

As far as my experience goes the roots that the Mishmis bring down to Sadiya are all alike: there are no two forms among them.

The leaves of the Mishmi plant are elongate-deltoid in outline; and a normal one is drawn as fig. No. 11 opposite. and by the side of it is a leaf with the lateral lobes unusually large.

I now pass on to the Chinese plant. In the first instance it is wild on the Burmo-Yunnan boundary, whence Mr. H. G. C. Leveson in 1905 sent it to me. He had found it on moist soil, under a canopy of big trees where little else grew, in the Hpaie and Pienma region, long. 98° 30′ and lat. 25° 45′. West of this it is known to be cultivated (often under an artificial shade as is Ginseng): thus, Hosie ascertained that it is cultivated consi-

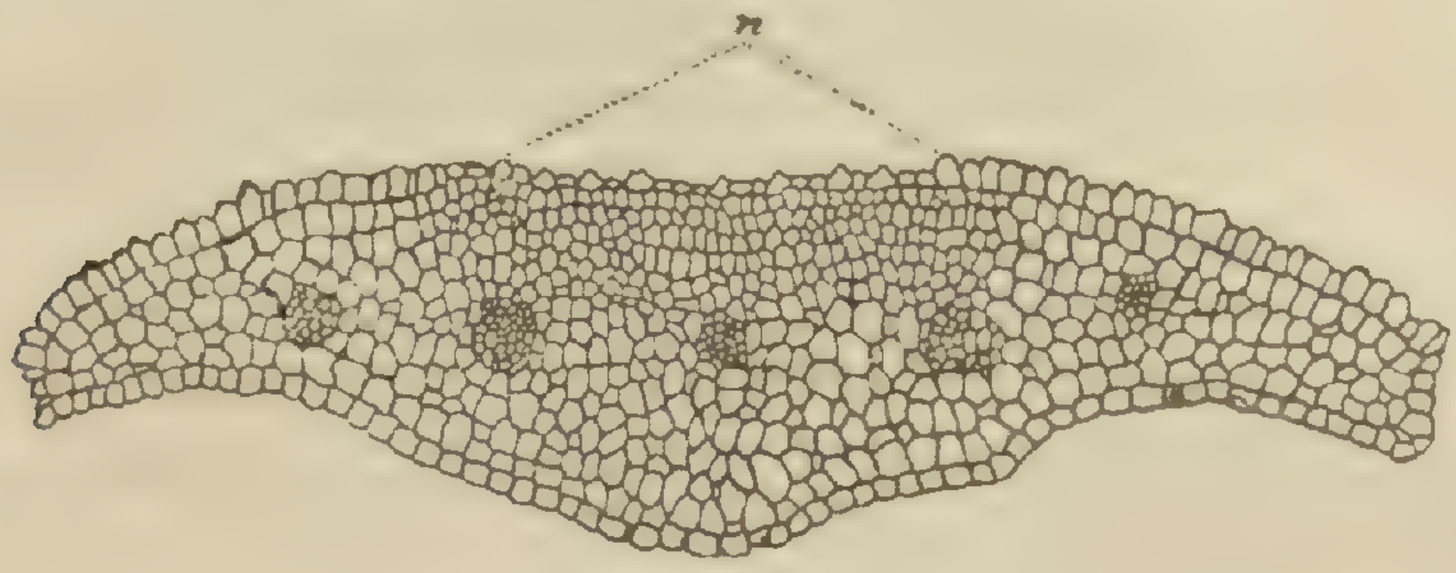

FIG. 10.—A petal in section showing the nectary (*n*).

derably at Ya-chou-fu in the centre of Szechuen whence there is a large export (*Report on the Province of Ssuchuan*, 1904, p. 49); Farges ascertained that it is cultivated at Heou-pin in the eastern part of Szechnen, Wilson that it is grown in adjoining Hupeh, and Henry in that part of Hupeh which is known as North Wushan. Further Ford has obtained a specimen from the remote neighbourhood of Canton—whether cultivated or wild I do not know.

Everywhere in China, from the Burmo-Yunnan border to Canton, the plant is known as Huang-lien (pronounced, so Mr. Dunn tells me, in Hong-kong as Wong-lin), and its roots are used as a medicine. Porter Smith, who collected information in Chinese drugs in the north of the kingdom, obtained Coptis roots under the same name (*vide* Holmes, *loc. cit.*).

Franchet, in the *Journal de Botanique*, 1897, p. 231, with Father Farges and Dr. Henry's specimens before him, described the southern Chinese plant as something different from *C. Teeta*, giving it the name of *C. chinensis*, because he said "the form of the petals and sepals sharply differentiates it." There can be

no doubt that Franchet's differences are no greater than Huth's. Franchet, when he spoke of *C. Teeta*, indicated thereby Griffith's plants; and had he but known that the petals of *C. Teeta* are, as is obvious with the material now in India, more commonly narrow, thick and nectariferous than flat and petal-like, he would not have laid stress upon differences in these organs. The fact is, he made the mistake of thinking that Griffith's drawings represent the plant as always found among the Mishmis. He, however, adds that the leaves differ slightly in shape. So they do; and I reproduce a drawing from one of Henry's plants that

FIG. 11 (left hand).—Normal leaf of *Coptis Teeta*. FIG. 12 (right hand).—Leaf with unusually large lateral lobes. One half natural size.

the reader may judge what this difference is. With Finet and Gagnepain I am prepared to call the Chinese cultivated plant *C. Teeta* var. *chinensis*; but I cannot count it as a good species. Ieveson's plant is, however, typical *C. Teeta* as regards the leaves and fruit: flowers are not present.

I now pass on to the Japanese plants. The Japanese have a general name for all species of *Coptis*: it is O-ren, *i.e.*, Yellow ren. Some species they cultivate. I know the Japanese plants best from the Japanese works *Phonzo Zufu* and *Somoku Zusetzu*, the text of which my friend Mr. Tomoh Hirata has kindly translated

to me, and also from the *Yuyu Shokubutsu Zusetzu*, published by the Agricultural Society of Japan in 1902, the text of which I have had translated.

The *Phonzu Zufu*, as represented at the Royal Botanic Gardens, Calcutta, contains eleven coloured figures of *Coptis*. The first is of a shiny-leaved plant with very short rhizomes, which, the writer says, grows in the province of Kaga. It is identified by Franchet as *C. anemonæfolia*. The second is said to be a large-leaved plant which grows in the province of Satsuma : Franchet, in the *Enumeratio Plantarum japonicarum*, doubtfully identifies it with *C. orientalis*, adding that perhaps it represents but a cultivated variety of *C. anemonæfolia*, but in the *Journal de Botanique*, 1897, p. 228, he dismisses the query, and accepts it as *C. anemonæfolia*. The third is described as having leaves very like the first : but it is represented as differing in colour and in rhizome : its origin is not stated : Franchet in the *Enumeratio* identified it as *C. occidentalis* ; but in the *Journal de Botanique* he identifies it as *C. anemonæfolia*. The fourth is identified by Franchet as the same as the last in either work : it is recorded as growing in the province of Wakasa. The fifth plant is described as having the leaf of parsley : it comes from the province of Tamba at Kamiana (near Wakasa), and also grows in the mountains of Nikko in the Shimisu province, and plentifully on Yamasiro in the province Kifuna : Franchet in the *Enumeratio* calls it *C. brachypetala*, while in the *Journal de Botanique* he does not quote the plate. The sixth plant is identified by the author of the *Phonzo Zufu* with the last. The figures of all these, much reduced, I reproduce here.

FIG. 13.—Leaf of *Coptis Teeta*, var. *chinensis*, from a specimen collected by Dr. A. Henry. **Reduced to one half.**

Illustrations nos. 7, 8 and 9 of the *Phonzo Zufu* are of a somewhat different type of plant which Franchet identifies as *C. brachypetala*, and are obviously but one species, which being the case, I reproduce but the first of the figures (my fig. 20). It has a rhizome very like that of the *C. Teeta* in appearance. The author of the *Phonzo Zufu* says that the figures are of plants growing in the Idzu and Idzumi provinces and at Kyi, and a little in

FIG. 14.—From the first figure of *Phonzo Zufu* with a petal and a sepa from the *Somoku Zusetzu.* This is here accepted as *Coptis anemonæfolia*—a source of the root of the Japanese market.

Yezo at Hokkeido ; but the Hokkeido plants, he adds, are small. The eighth figure is of a plant such as occurs in Idzu, and the ninth of the small Hokkeido plant.

Figs. 10 and 11 in the *Phonzu Zufu* are of *Coptis trifolia* and *C. quinquefolia*, which have a rooting system dissimilar to the preceding, and are unlikely to furnish any of the imported drug: they may, therefore, be left without further discussion.

Yokusai, in the *Somoku Zusetzu*, is careful to mention the production of honey on the petals ; his figure, no. 36, resembles the first figure of the *Phonzo Zufu*, and it is called by him *C. anemonæfolia*. I fully believe that he figures the same plant, and that Franchet's identification of the two is quite correct. In figure 37, he figures *C. quinquefolia*, and in figure 38, *C. trifolia*.

In the *Yuyo Shokubutsa Zusetsu*, fig. 399, labelled "Kikuba

FIG. 15.—From the second figure of the *Phonzo Zufu*. It was identified by Franchet as *C. orientalis*. Study of living plants is required to distinguish it clearly.

oren, *Coptis occidentalis*," agrees very closely with the third figure of the *Phonzo Zufu*. Fig. 398 Oren or Seriba oren agrees with the sixth figure of the *Phonzo Zufu ;* figure 401, "Hosoba oren" is like a diminutive of it, and figure 400, "Mitsub aoren," is, as labelled, undoubtedly *Coptis trifolia*. The *Yuyo Shokubutsu Zusetsu* says that all the three species figured are medicinal—all have bitter roots which may also be used to give a yellow dye : they should be collected after the flowering time

when new leaves are springing up: all grow wild. The leaf of *Coptis occidentalis* is likened to a Chrysanthemum leaf.

Next regarding the identifications of these figures The first figure of the *Phonzo Zufu*—my figure 14—may be considered as *C. anemonæfolia*, which, as the *Yuyo Shokubutsu Zusetsu* says under its corresponding figure, is medicinal. *C. anemonæfolia* is one of the species reduced by Finet and Gagnepain to the condition of being a variety of *C. Teeta*; but between the figures referred to and the true Mishmi Tita, I observe consider-

FIG. 16.—From the third figure of the *Phonzo Zufu*. This was identified by Franchet in the first instance as *Coptis ? occidentalis* but it can hardly be that American species: in the second instance he identified it with *Coptis anemonæfolia*, but the *Phonzo Zufu* represents its leaves as dull, and those of *C. anemonæfolia* as shining.

able differences; the middle lobe of the leaf is very different in outline and apparently conspicuously so in colour. I, therefore, am inclined to separate them. Finet and Gagnepain again unite, as one, *C. anemonæfolia* and *C. orientalis*. If my figure 15 correctly represents *C. orientalis*, then I hesitate to accept Finet and Gagnepain's union.

Among my figures 15, 16, 17, 18, and 19, the plant figured as No. 16 stands rather apart. As I have said, the figure, no. 399, called "Kikuba oren, *C. occidentalis*," in the *Yuyo Shoku-*

butsa Zusetsu, represents the same ; and the *Yuyo Shokubutsa Zusetsu* says it is medicinal. I cannot consider it as *C. occidentalis* at all : the leaves are simply trifoliolate, the leaflets roundish in outline ; but they are not long petiolulate, are not obtuse lobed, nor obtusely dentate. And if figure 16 does not represent *C. occidentalis* then figures 17 and 18 most certainly do not. Franchet it was who provisionally placed them under *C. occidentalis*. I am not at present prepared to place them under any recognised name[1] : though I suspect that they cover the

FIG. 17.—From the fourth figure of the *Phonzo Zufu*. Franchet considered it to represent the same species as the last figure.

range of the species considered to be *C. occidentalis* and *C. orientalis* by Franchet and Huth. I reproduce the figures here in order to draw attention to the plants.

Franchet, in the *Journal de Botanique*, 1897, pp. 227-229, says that three of his species are cultivated in gardens in Japan, viz., *Coptis anemonæfolia*, *Coptis orientalis*, and *Coptis brachypetala*. He says on the authority of Faurie that the first is

[1] Unfortunately *C. japonica*, Makino, is, except in name, altogether unknown to me. Is it meant to be *Coptis occidentalis* var. *japonica*, Huth.

frequently cultivated as a border or edging, *e.g.*, at Yedo and Shonai. Finet and Gagnepain, after uniting *Coptis anemonæfolia* and *Coptis orientalis*, record the same information. The Shonai specimen is Faurie's no. 2741, and Huth in the *Bulletin de l'Herbier Boissier*, v, 1897, p. 1086, quotes this number as *Coptis occidentalis* var. *japonica*, along with Faurie's nos. 2416 and 4405, one of which, the second, in Franchet's opinion, is *Coptis orientalis*, and the other—the first, *Coptis anemonæfolia*. Thus Huth's *Coptis occidentalis* var. *japonica* takes a little from

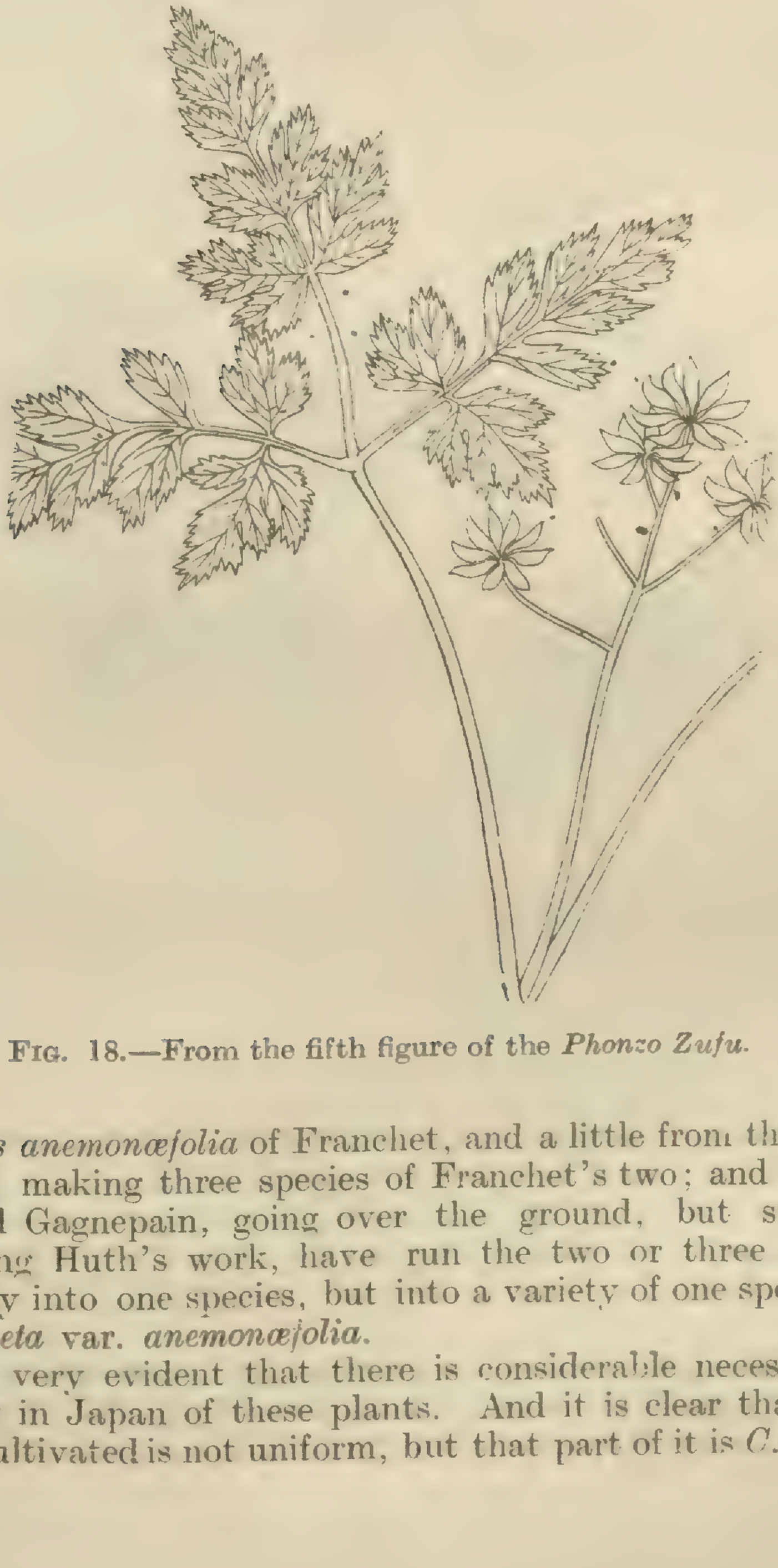

FIG. 18.—From the fifth figure of the *Phonzo Zufu*.

the *Coptis anemonæfolia* of Franchet, and a little from the *Coptis orientalis*, making three species of Franchet's two; and latterly Finet and Gagnepain, going over the ground, but somehow overlooking Huth's work, have run the two or three species, not merely into one species, but into a variety of one species, as *Coptis Teeta* var. *anemonæfolia*.

It is very evident that there is considerable necessity for the study in Japan of these plants. And it is clear that what is there cultivated is not uniform, but that part of it is *C. brachy-*

petala, and the part is either a variable species or two or three allied species.

Franchet quotes from collectors certain vernacular names, three of which appear to be misspelled. They are as follows :—

Coptis trifolia = Mits ouwa, certainly meant for Mitsuba oren.

Coptis occidentalis = Ki kwa oren, evidently meant for Kikuba oren.

Coptis anemonæfolia = Kakouma cza.

Coptis brachypetala = Seribano, evidentiy meant for Seriba oren ; also called oren.

FIG. 19.—From the sixth figure of the *Phonzo Zufu*.

I have received from Hong-kong, by the kindness of Mr. S. T. Dunn, Superintendent of the Botanic and Afforestation Department, roots of the only kind of *Coptis* to be got in that market.

They come, he says, from Szechuen and they are undoubtedly *C. Teeta* var. *chinensis*. A chemical investigation of them will be undertaken in the hope of getting some useful information. The roots of all species of *Coptis* apparently contain berberine which is their yellow bitter. Besides berberine *C. trifolia* is known to contain "a white crystalline alkaloid which has been called coptine, but concerning the identity of which nothing is known, except that it dissolves in concentrated sulphuric acid without colour, becoming purple on warming" (*vide* Hale. Caspary, Rusby, etc., *The National Standard Dispensatory*, New York, 1905, p. 1304). The amount of berberine weighed as sulphate in *Coptis trifolia* roots is 8 per cent. (teste Schultz in *American*

FIG. 20.—From the seventh figure of the *Phonzo Zufu*. It undoubtedly represents *Coptis brachypetala*.

Journal of Pharmacy quoted in *Pharmaceutical Journal and Transactions*, series 3, 1883-84, p. 973).

My conclusions, then, are :—(*i*) that it is a variety of *Coptis Teeta*, which is the plant cultivated in China and named by Franchet *Coptis chinensis*, (*ii*) that Japan produces wild and cultivates *Coptis anemonæfolia*, the roots of which seem to be used medicinally, (*iii*) that closely allied to *Coptis anemonæfolia* occur in Japan, both wild and in cultivation, plants called *Coptis orientalis* by various authors, and *Coptis occidentalis* (*?*) by Franchet, or *Coptis occidentalis* var. *japonica*, by Huth, which ought to be studied alive for satisfactory discrimination ; further (*iv*) that, so it seems, the Mishmis get part of their supply of roots by cultivation. We must now ask ourselves (*i*) in what way the growth of the root is affected by cultivation in region

more temperate than the plants own, and (*ii*) whence exactly come the two kinds of root imported over seas into India. There is some probability that the answer to the second question will be that the one kind is cultivated Chinese *C. Teeta* (var. *chinensis*), and the other the root which Schaer and Holmes designate most likely correctly enough, as *C. anemonæfolia*.

13. First Notes on *Cymbopogon Martini*. Stapf.

By I. H. Burkill.

In October of last year, I made a tour in Nimar and Berar on purpose to collect information about *Cymbopogon Martini* and its oil. I travelled in Nimar by road from Burhanpur to Asirgarh and to Chandni, visiting the only still in the country side; and I travelled in Berar by road from Amraoti through Ellichpur—an important trade centre for the oil—into the Melghat as far in different directions as Chikalda, Lewada in the Sipna valley, and Makla north of it, visiting all the stills—five—that were to be found.

Every one of the stills visited was distilling from the grass called Motia, and no single one from the grass called Sofia: but in Ellichpur I was able to procure a sample of Sofia oil distilled in 1907 in a part of the Melghat that I have not visited.

This paper is entitled "First notes" because in the current year I hope again to traverse the Melghat and to visit other districts in order to prosecute my work.

Motia and Sofia are remarkable varieties of *Cymbopogon Martini*. The word motia means like a pearl, *i.e.*, precious; and as the Rao Saheb P. B. Despande first kindly told me, sofia means inferior.[1] The names express the relative values of the two oils. Motia oil has been investigated chemically by several workers, and is well described in Gildermeister and Hoffmann's *Volatile oils* (translated by Kremers, Madison, 1900, p. 281). It consists of an alcohol called Geraniol, together with about 10 % of other bodies which need not be mentioned by name in this place. Sofia oil has been investigated, since that book was written, by Walbaum and Hüthig at the instance of Messrs. Schimmel and Co., of Miltitz near Leipzig, and a paper published in the *Journal für praktische Chemie*, new series, vol. 71, 1905, pp. 459-473. The two chemists find, as indeed we in the Indian Museum knew some years ago, that there is a good deal of Geraniol in Sofia oil: they find mixed with it another alcohol which is dihydrocumin alcohol; the two alcohols together made 50—60 % of their samples: but what is most important they identify in Sofia oil the strong smelling substance as i-carvon.

Motia and Sofia oils differ, then, in chief in the absence or presence of this Carvon. Motia and Sofia grasses equally differ.

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[1] Sofia would be the Nimari pronunciation of Sonfia, *i.e.*, fennel-like, but this is not the origin of the word.

On my tour I collected, at the stills themselves, samples of Motia oil, and I also bought both oils in Ellichpur. A part of each sample of oil that I procured was sent to Messrs. Schimmel and Co., who reported thus : "All the Motia oils proved on examination to be good Palmarosa oils of a normal character. In some of them the Geraniol content reaches a height very seldom found in Palmarosa oil. Regarding odour, the various types show small differences, it is true, but they all have a Palmarosa character . . . . . The sample described as Sofia is an excellent ginger grass oil."

This report from Messrs. Schimmel and Co. I quote to show that in the parts visited by me the Motia and Sofia give their distinct and typical oils.

I expected to find in the field, and set myself to seek for, differences in the grasses other than this chemical one, and I soon learned, in the parts that I visited, to distinguish by the eye growing Motia from growing Sofia, just as the grass collectors do ; I ultimately was able to tell Motia from Sofia almost certainly at a distance of 20 yards. The very first cross-questioning of the villagers in any part of the country visited, immediately showed me that they know the grasses apart without smelling them, though they are in the habit, when gathering the crop, of using the scent as a test.

I began work near Asirgarh, where Motia grows on the black soil about the foot of the hill, and Sofia on the top of the hill. There the collectors said Sofia is not so tall and erect as Motia is ; it bears root leaves in plenty, while Motia lacks them ; it has the inflorescence crowded ; moreover it grows on soil-less places. Study made me believe that the first three characters of Sofia, as given, are due to the want of soil in the places where it grows : want of soil enables it to live free from tall competition, and so it is not drawn up as Motia usually is ; it does not get its roots smothered, and so keeps a tufted habit ; and want of food, as well as not being drawn up, makes the inflorescence to be denser than that of Motia.

Motia on the railway banks near Chandni station was six to eight feet high : Sofia in the fort of Asirgarh was but three or rarely four.

One point was evident, *viz.*, that the two plants grow in different habitats.

Leaving Nimar and proceeding to the Melghat, I again found that the two grasses prefer different habitats. Motia prevails on the lower south slopes where the forest is thin and the soil much dried up : Sofia prevails in the best forest, and about the steeper hill slopes. For the most part either the one or the other is to be found in any area, and the collectors of the grass, who are gathering Motia, are unlikely to meet with much Sofia when collecting in profitable places. But still the two do mix. From Ellichpur I first visited two stills at the very foot of the

hills,—one west of Ellichpur at Deogaon, and the other north-east at Belkhera : Motia grass I saw in abundance on these two expeditions, but of Sofia one plant only. On a third occasion I descended the ghat near Dhamangaon, and found on the lower slopes only Motia.

A little further back in the hills on steep slopes, and especially at first on slopes not facing south, I began to meet with sheets of Sofia. Later, on the highest slopes, upon any face, I found Sofia to be the form generally found; and when over the watershed, in the Sipna valley, I found nothing but Sofia until towards the Tapti, I neared the third class thinner forests which surround the good teak forests about Sembadow.

On the rocky sides of Gawilgarh as on Asirgarh, Sofia had root leaves, and was bunched, and short ; but in the Melghat these are not the characters by which to tell it, and the grass collectors do not rely on them : they say that it has broader leaves, darker colour, and is taller, and the spikes larger.

It is to be noted, then, that whereas at Asirgarh Sofia was of shorter growth than Motia, it is said to be taller in the Melghat : I find the statement correct. I measured one tall plant of Sofia west of Harisal, and found it to be $8\frac{1}{2}$ feet high ; others were nearly as high. The fact is that either grass in the spots most suited to it is taller than the other. Breadth of leaves goes with the height ; and colour in a general way, too.

However, this further I worked out in the Melghat, that Motia and Sofia leaves are set on to their sheathes at very different angles. I figured these angles very carefully, and here reproduce my drawings, together with one made from Motia grown in my own garden in Calcutta.

I attribute the distribution of Sofia and Motia to different preferences in climate, Sofia liking more moisture than Motia. Motia in the Melghat grows where the associated grasses grow knee high ; Sofia where the same species grow neck high. Sofia is the variety which occurs in the first class teak forests ; there rapid evaporation at night cools the air enormously, even enough for frosts to occur in February, and dew is copiously deposited over much of the year. On banks chiefly—for the grass obviously likes good drainage [1]—in this area of abundant dew, Sofia rules. It rules, as said, also on the upper slopes of the hill forts of Asirgarh and Gawilgarh ; against the cliffs of these forts the south-west monsoon, throughout July, banks clouds, and to their moisture I attribute the success of Sofia on the cliffs.

Motia, on the other hand, grows where the dews and mists are not so copious : that is, chiefly in the outer forests and below

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[1] When Sofia grows on the flat, as it sometimes does, it is not nearly so vigorous, as on any adjacent bank. It particularly affects the very edge of any sunny cutting on the roadside, and often Motia does the same—each in its own parts of the hills.

the parts of the hills where the clouds bank. But equally with Sofia it appears to have no objection to ascend to the hill tops in suitable localities.

I have had both in cultivation in my garden in Calcutta, but Sofia I cannot keep alive for long, though Motia lives easily : this is another expression of their different preferences in climate.

In four spots on this tour I found plants which were neither Sofia nor Motia. I had found such forms of *Cymbopogon Martini* in other places before ; but I do not intend to speak here of

Leaves of Motia (1-3) and of Sofia (4-6). Nos. 1 and 2 were drawn at Ghatang, and No. 3 from a plant cultivated in Calcutta; Nos. 4, 5 and 6 were drawn at Sembadow.

earlier finds, but only of those of Satpuras. The four spots were (i) near Harisal in the Sipna valley, (ii) near Bauli over Ellichpur, (iii) on the Merki platan, and (iv) in Amraoti itself. At Harisal Motia and Sofia meet ; and the atypic grasses that I found there I consider to be hybrids : I found a number of roots, the plants having rather the facies of Motia, but the smell of Sofia. At Bauli Motia and Sofia similarly meet, and so also at Merki ; in both places the atypic plants were intermediate in character, and apparently hybrids. At Amraoti, in the compound of Mr.

W. Forbes, I found a large sheet of another intermediate, not mixed with the two parents, which, however, grow I believe not very far away.

I think that it must be accepted that Motia and Sofia produce hybrids; but there is yet a great deal to find out about it, and I do not desire to describe them now, chiefly because I think that there are yet other varieties of *Cymbopogon Martini* to be isolated by study.

Motia and Sofia do not differ in the flowers, nor in the inflorescence, nor in the anatomy of the leaves, except in so far as already stated.

The primary difference between the two is the chemical one of the absence or presence of carvon, and this accompanies preferences for slightly diverse climatic conditions. For the Melghat the difference in the position of the leaves (as figured) is satisfactory to rely on. The breadth of the leaves is locally fairly constant, but is a consequence of the suitability or unsuitability of any particular hill side for the one variety or the other.

I do not see why we should not name these varieties respectively as var. *Motia* and var. *Sofia*.

From what I have said it will be evident why so prominent a botanist as Dr. Stapf working with dried material has been unable to distinguish the two varieties apart. In his splendid paper on the oil-grasses of India and Ceylon (Kew Bulletin, 1906, pp. 297-363), he was forced to content himself with merely noting the breadth of the leaves as a feature that might be usefully recorded.

In my work last year I received and gratefully acknowledge, the greatest assistance from Mr. C. G. Rogers, Conservator of Forests, Berar, and also from Mr. D. O. Witt and Mr. H. E. Bartlett of the Forest Service. Without their help I should not have been able to do as much as I have done. I have further to thank Messrs. Schimmel and Co. for the kind way in which they received and reported on my specimens.

MARCH 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 3rd March, 1909, at 9-15 P.M.

MAHAMAHOPADHYAYA HARAPRASAD SHASTRI, M.A., Vice-President, in the chair.

The following members were present :—

Dr. N. Annandale, Mr. I. H. Burkill, Mr. L. L. Fermor, Mr. D. Hooper, Mr. T. H. D. LaTouche, Major L. Rogers, I.M.S., Dr. Satis Chandra Vidyabhusana, Mr. W. C. Wordsworth, Rev. A. W. Young.

Visitors :—Dr. J. Travis Jenkins and Mr. Oliver Ransford.

The minutes of the last meeting were read and confirmed.

Ninety-six presentations are announced.

The Chairman announced that Mr. E. G. Hill had expressed a wish to withdraw from the Society.

The General Secretary reported the death of Sir George King, K.C.I.E., an Honorary Member of the Society.

The following eleven gentlemen were ballotted for as Ordinary Members :—

Mr. J. R. R. Wilson, M.I.C.E., F.G.S., Chief Inspector of Mines in India, proposed by Sir Thomas Holland, K.C.I.E., seconded by Mr. L. L. Fermor ; *Rai Bahadur Matilal Ganguli*, Treasurer, Currency Office, Calcutta, proposed by Dr. N. Annandale, seconded by Mr. G. H. Tipper ; *Babu Nilmani Chakravarti*, M.A., Professor, Presidency College, Calcutta, proposed by Mahamahopadhyaya Haraprasad Shastri, seconded by Sir Thomas Holland, K.C.I.E. ; *Babu Brajalal Mukerjee*, M.A., Solicitor, proposed by Mr. D. Hooper, seconded by Mr. I. H. Burkill ; *Dr. M. N. Chatterjee*, M.B., proposed by Babu Roormal Goenka, seconded by the Hon. Mr. Justice Asutosh Mukhopadhyaya ; *Babu Badridas Goenka*, B.A., proposed by Babu Roormal Goenka, seconded by Dr. Satis Chandra Vidyabhusana ; *Hon. Deva Prasad Sarbadhikari*, M.A., B.L., Attorney-at-Law, proposed by the Hon. Mr. Justice Asutosh Mukhopadhyaya, seconded by Dr. Satis Chandra Vidyabhusana ; *Mahamahopadhyaya Banke Rai*, Delhi, proposed by Dr. Satis Chandra Vidyabhusana, seconded by Babu Monmohon Chakravarti ; *Dr. Indu Madhab Mullick*, M.A., M.D. (London), proposed by Dr. N. Annandale, seconded by Mr. G. H. Tipper ;

Rev. R. W. LeQuesne, Minister, Hastings Chapel, proposed by Mr. D. Hooper, seconded by Rev. A. W. Young; *Syed Abdul Latif*, Deputy Magistrate and Deputy Collector, Barisal, proposed by Moulvi A. F. M. Abdul Ali, seconded by Babu Manmatha Nath Moitry.

Mr. Balkrishna Atmaram Gupte was balloted for and elected an Associate Member.

In accordance with Council Orders, the General Secretary submitted the following report in connection with the 125th Anniversary of the Society:—

The Society celebrated its 125th Anniversary on Friday, January 15th, 1909. The celebration took the form of an evening reception held, by permission of the Trustees, in the Indian Museum. Many Scientific, Archæological, Philological and Historical exhibits were shown, illustrating the progress and activities of the Society.

Their Excellencies the Viceroy, Patron of the Society, and Lady Minto were present, and 277 other ladies and gentlemen (Members and Guests) attended.

A sum of Rs. 1,285 was subscribed by Members of the Society, and the Council guaranteed an additional expenditure of Rs. 500. As the total cost of the entertainment was Rs. 1783-10-9 as per statement of expenditure below, the Anniversary Entertainment Committee have to ask the Council to pay Rs. 498-10-9.

Expenditure.

	Rs.	A.	P.
Refreshments	484	3	6
Lights and Current	434	0	0
Music—			
Band	163	0	0
Pipers	95	0	0
Contingencies—			
Decoration, etc.	607	7	3
TOTAL Rs.	1,783	10	9

The following papers were read :—

1. *Studies in the Experimental Breeding of Indian Cottons: an introductory note. Part II.—On Buds and Branching.*—*By* H. MARTIN LEAKE, M.A.

This paper has been published in the *Journal* for January, 1909.

2. *Maharaja-Kanika-lekha, or a letter to King Kaniska recovered from Tibet.*—*By* DR. SATIS CHANDRA VIDYABHUSANA.

3. *Notes on the Theory of Souls among the Malays of the Malay Peninsula.*—*By* N. ANNANDALE, D.Sc.

4. *A new Manuscript of Buddha Carita.*—*By* MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

5. *Tamariska Manna.*—*By* D. HOOPER.

These papers have been published in the *Journal* for February, 1909.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's Rooms on Wednesday, March 10th, 1909, at 9-15 P.M.

LIEUTENANT-COLONEL F. P. MAYNARD, I.M.S., in the chair.

The following members were present :—

Captain H. B. Foster, I.M.S., Captain J. W. D. Megaw, I.M.S., Lieut. Col. A. H. Nott, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitors :—Major F. R. Ozzard, I.M.S., Captain H. E. Smith, I.M.S.

The minutes of the last meeting were read and confirmed.

The Medical Secretary gave an account of the Bombay Medical Congress.

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14. The Hero-Gods of the Rigveda—Trita.

By A. C. Sen, M.A., M.R.A.C.

The character of *Trita* is one of the puzzles of the Rigveda. There are *riks* which leave us no alternative but to take him for one of the early sacrificers and a king. On the other hand, in some of the verses, he appears unmistakably as a god of the atmosphere—the scene of the thunderstorms, clouds and rain. He is also represented to have been the first to perform some of the most important valorous deeds that were afterwards ascribed to the mighty god *Indra*.

Both the eastern and the western scholars have tried their best to explain away this double character of *Trita*. For example, for the distinct human side of his character *Sāyaṇa* following *Yāska* has taken him for a **राजर्षिः**—a sacrificer and a king. But where he has been described as a god, that great commentator has explained it away by taking the word *Trita* in such passages as a mere adjective to some other god and meaning "living in three places," "most intelligent," etc. Professor Macdonell [1] on the other hand, starting from the theory that all vedic gods had physical phenomena as their original basis—the *Naturbedeutung* of the German scholars—has failed to appreciate the significance of those passages which describe *Trita* as a man.

Following the plan explained in my previous papers on "The Hero-Gods of the Rigveda," I have first tried to interpret all the passages in which reference has been made to *Trita*, in the most easy and natural way possible, without at all caring what conclusions this may lead to. I have next classified them, *i.e.*, put all the passages that convey the same idea under a separate group. Finally I have tried to combine the ideas under the different groups by a general statement. But though this is the plan I have strictly followed in my working note book, to prevent unnecessary and tedious repetitions, in the paper as now presented, I have united together the first two steps, *i.e.*, the interpretation and the grouping of the *riks* have been given together.

The information regarding *Trita* given in the Rigveda is meagre. There is not a single entire hymn addressed to him.

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[1] Professor Macdonell's Monogram on *Trita* published in the Journal of the Royal Asiatic Society for 1893 being the most elaborate and learned paper on the subject, I shall have to refer to it repeatedly.

A. C. S.

There are only forty verses scattered over twenty-nine hymns in seven out of the ten *Mandals* that relate to him. No mention is made of him in the third, fourth and the seventh *Mandals*. The Avesta hardly supplies us with any additional information. The two great scriptures, again, make one or two conflicting statements about *Trita* which must be carefully considered before we can come to any definite conclusions regarding this god.

I. Passages shewing that Trita was a man :

(a) A vedic Ṛiṣi of the Angiras family claims him as one of his ancestors.

I. 105 is said to be a hymn on the *All-gods*. The contents, however, shew that the *Ṛiṣi* composing it was not in the proper mood to glorify the gods, having been entirely occupied with his own miseries.

Only two out of the nineteen *ṛiks* of the hymn refer to *Trita*, namely, the ninth and the seventeenth. The object of these two *ṛiks*, however, can only be properly understood if they be read along with the eighth. With this *ṛik*, therefore, I begin—

सं मा तपन्त्यभितः सपत्नीरिव पर्शवः ।
मूषो न शिश्ना व्यदन्ति माध्यः स्तोतारं ते शतक्रतो.....॥ ८

My ribs are burning me on all sides like two rival wives.
The phallic-worshippers are biting your praiser, O *Çatakratu*, like rats, as also my own mental agonies . . . . , I, 105-8.

Remarks :—I have taken शिश्नाः for शिश्नदेवाः of VII, 21. This is also the meaning of the word in X, 27-10. Similarly, in a number of passages the word देवाः is used in the sense of *deva*-worshippers and असुराः in that of worshippers of *Asura*.

1. अमी ये सप्त रश्मयस्तत्रा मे नाभिरातता ।
चितस्तद्वेदाप्त्यः स जामित्वाय रेभति..... ॥ ९

Where those seven rays are (*i.e.*, in the sun), there my navel (=source) extends.
Āptya Trita knows that. He proclaims kinship . . . . . 9.

Remarks :—The word अमी shews that the *Ṛiṣi* is pointing out some thing in heaven. The word has been similarly used in two other *ṛiks* of this very hymn, namely, the fifth and the tenth, and also in I, 24-10. The सप्त रश्मयः therefore cannot refer to seven fires in the sacrificer's house as suggested by Ludwig. In *ṛik* VIII, 72-16 सप्त रश्मयः has been expressly referred to the sun —सूर्यस्य सप्त रश्मिभिः ।

The idea of the navel of the *Ṛiṣi* extending to the sun where the seven rays are, arose this way : when a child is born its navel is found connected with the mother's womb, *i.e.*,

extending up to it. The *Ṛiṣi Kutsa* says that his navel extends up to the sun, *i.e.*, his source, his ancestors, are there. *Kutsa* according to tradition belonged to the *Angiras* family, and it is well known that the ancestors of this family were especially connected with *Yama* and are now living in the sun. Among the *Pitṛis* they occupied the most prominent place.

मातली कव्यैर्यमो अङ्गिरोभिर्बृहस्पतिर्ऋक्वभिर्वावृधानः ।
युँश्च देवा वावृधुर्ये च देवांस्वाहान्ये स्वधयान्ये मदन्ति ॥ १० । १४ । ३
अङ्गिरसो नः पितरो नवग्वा अथर्वाणो भृगवः सोम्यासः । ६
इमं यम प्रस्तरमा हि सीदाङ्गिरोभिः पिृभिः संविदानः ।
आ त्वा मन्त्राः कविशस्ता वहंत्वेना राजन्हविषा मादयस्व ॥ ४
अङ्गिरोभिरा गहि यज्ञियेभिर्यम वैरूपैरिह मादयस्व ।
विवस्वन्तं हुवे यः पिता तेऽस्मिन्यज्ञे बर्हिष्या निषद्य ॥ ५

Mātalī (=*Indra*) is magnified with the *Kavis; Yama* with the *Angirases*; *Bṛihaspati* with the *Ṛikvaṇs*—whom the gods magnified and who magnified the gods—these (=the gods) delight with *svāhā* and those (the *Kavis*, *Angirases*, the *Ṛikvaṇs*, *i.e.*, the *Pitṛis*) with *Svadhā*, X, 14—3.

Our *Soma*-offering fathers—the *Angirases*, the *Navagvas*, the *Atharvaṇs*, the *Bhrigus*, 6.

United with the *Angirases*, O *Yama*, come and sit on this grass seat spread here. May the hymns uttered by the *Kavis* bring you here. Be exhilarated, O King, with this libation. X, 14-4.

Come, *O Yama*, with the adorable *Angirases*, with the *Vairupas*, and rejoice in our sacrifice.

I call also on *Vivasvān*, who is your father, to sit on the grass seat in this sacrifice, 5.

Ṛiṣi Kutsa says that *Trita* knows that he (*Kutsa*) is a descendant of the *Angiras* family. For *Trita* himself proclaims his kinship. The *ṛik* does not say clearly kinship with whom is proclaimed by *Ṫrita*. The contents shew, however, that it must be with the *Angirases* and thus with our poet. For otherwise there would be no necessity to mention the fact here. On the other hand *ṛiks* I, 163-3; X, 8-7 and X, 8-8 shew that *Trita* was a descendant of the Royal family of *Vivasvān*. Probably both these mean the same thing, *i.e.*, that the family of *Vivasvān* was a branch of the *Angirases*. This would explain statements like the following :—

यमो अङ्गिरोभिः ··· वावृधानः : *Yama* is magnified along with the *Angirases*. बृहस्पतिर्ऋक्वभिर्वावृधानः has a similar meaning, *i.e.*,

that *Brihaspati* was one of the *Rikvans*, the composers of *Riks*. This is clear from the following verse :—

इदमकर्म नमो अभ्रियाय यः पूर्वीरिन्वानोनवीति ।
बृहस्पतिः स हि गोभिः सो अश्वैः स वीरेभिः स नृभिर्नो वयो धात् ।
१० । ६८ । १२

We have made this hymn for him who stays in the clouds and who sings many a hymn one after another.

May *Brihaspati*—he to us as well as to our cows—as well as to our horses—as well as to our heroes—as well as to our leaders—give long life. X, 68-12.

That Gandharva Vivasvān belonged to the *Angiras* family follows also from Bri. Āra. Upaniṣad III, 3-1.

Kutsa says that what is ordinarily known as the thundering of *Trita* is the proclamation by him of his kinship with the *Angirases*.

I quote below another *rik* by the same poet to shew that what he is speaking of here is really the kinship of the family and not that of the relation that a god bears to his worshippers.

आभोगयं प्र यदिच्छन्त एतनापाकाः प्राच्वो मम के चिदापयः ।
सौधन्वनासश्चरितस्य भूमनागच्छत सवितुर्दाशुषो गृहं ॥ १ । ११० । २

When desiring to enjoy your drink, you, some of my kinsmen of ripe wisdom, come forward [to the sacrifice].

Sons of *Sudhanvan*, by the greatness of your action you went to the house of *Savitā* the offerer of libations—I, 110-2.

Remarks :—*Kutsa* speaks of the *Ribhus*, the sons of *Sudhanvan*, as his kinsmen. According to him *Sudhanvan* belonged to the *Angiras* family like him. This is also stated in the Brihad Āraṇyaka Upaniṣad, III, 3-1. It appears from several passages of the Rigveda that the *Ribhus* were originally men who afterwards became gods on account of the good deeds सुकृति done by them. They were three brothers—*Ribhu*, *Vibhu* and *Vāja*. The second line of the *rik* says that on the attainment of divinity they went to the house of *Savitā*. सवितुर्दाशुषः is *Vivasvān* one of the earliest sacrificers and a king, who after death was merged in the sun. In the disc of the latter his son *Yama* with the help of the *Angirases* and other *Pitris* founded the kingdom of heaven, the Vedic paradise.

I quote below another similar *rik*.

दध्यङ् ह मे जनुषं पूर्वो अङ्गिराः प्रियमेधः कण्वो अत्रिर्मनुर्विदुस्ते
मे पूर्वे मनुर्विदुः ।
तेषां देवेष्वायतिरस्माकं तेषु नाभयः ॥ १ । १३९ । ९

Dadhyang, *Angiras* of old, *Priyamedha*, *Kaṇva*, *Atri* and *Manu* know my birth. They and *Manu* of old know my birth. Their destiny was to go among the gods. Our navels (=sources) are in them (*i.e.*, they are our ancestors)—I, 139-9.

Cf. *Pāli* आयति। The statement—तेषां देवेष आयतिः—in this *ṛik* will be clearly understood on remembering what has been said of *Yama* in the following verse :—

देवेभ्यः कमवृणीत मृत्युं प्रजायै कममृतं नावृणीत।
बृहस्पतिं यज्ञमकृण्वत ऋषिं प्रियां यममन्वं प्रारिरेचीत्॥१०।१३।४

Who chose death to be with the gods; who chose not deathlessness to stay with men.

Risi Brihaspati founded the institute of sacrifice. *Yama* offered his dear body as an oblation—X, 13-4.

We should also remember that *Yama* was a member of the *Angiras* family.

A little consideration will shew that the relationship spoken of in *riks* I, 105—9, 110—2, 139—9 is very different from that mentioned in *ṛiks* X, 7-3 and II, 1-9 given below.

अग्निं मन्ये पितरमग्निमापिमग्निं भ्रातरं सदमित्सखायं। १०।७।३

Agni, I deem my father, my kinsman, my brother, my friend, for ever. X, 7-3.

त्वामग्ने पितरमिष्टिभिर्नरस्त्वां भ्रात्राय पृम्या तनूरुचं।
त्वं पुत्रो भवसि यस्तेऽविधत्त्वं सखा सुशेवः पास्याद्दृषः॥२।१।९

The leaders, O *Agni*, worshipped you as father, with sacrifices—worshipped you who has a shining body, for brotherhood, by religious rites.

You become a son to him who adores you. Being a beneficent friend you protect him from his enemies—II, 1-9.

The connection between *riks* eight and nine of Hymn I. 105 is this. After having in the eighth *rik* spoken of his miseries, in the ninth the *Risi* speaks of his birth. He is surprised that a man of his high birth—a descendant of the great *Angiras* family whose ancestors are in heaven and whom god *Trita* acknowledges as his kinsman—should suffer in the way he has been suffering.

The word भ्रात्र I shall explain later on.

(*b*) *Trita is a man in distress whom god Bṛihaspati helps.*

2. त्रितः कूपेऽवहितो देवान्हवत ऊतये।
तच्छुश्राव बृहस्पतिः कृणवन्नंहूरणादुरु ... ॥१।१०५।१७

Fallen in a well *Trita* called on the gods for help.

Brihaspati listened to his prayer and from that narrow place brought him out to the wide world.—I, 105-17.

Why this stanza should find a place in Hymn I, 105, will not be difficult to understand if we will remember the mood in which the poet was when he composed it. He remembers an instance in which one of his own people—*Trita* a member of his own family—when visited by a calamity prayed for help. He was relieved by *Brihaspati*, one of the most powerful *Angirases* who had attained to divinity. The *Risi* seems to complain that though he is similarly crying for help none of the gods come to his rescue.

Yāska has here taken *Trita* for a man in distress. Professor Macdonell, however, is of opinion that *Yāska* and *Sāyaṇa* who has followed him, have not understood the mythological significance of the *ṛik* at all. He thinks that (1) *Trita* is mythologically the third form of fire or lightning; (2) His being thrown into a well is the obscuration of the atmosphere by the clouds ;—(3) this atmosphere—the mid-region—is according to him the कूपः of *ṛik* I, 105-17, the वव्रः of *ṛik* X, 8-7, and the उत्सः of X, 45-2. (4) This is also, he thinks, the distant place mentioned in *ṛiks* VIII, 47-10 to 16.

Before taking up these points for discussion, I think it should be noted here that in the Rigveda there are many instances of men falling into wells and of being rescued by the gods. Here is one: The *ṛik* is taken from the next hymn, composed also by *Kutsa*, and it was a *Ṛisi* of the same name, probably one of his predecessors who had fallen into a well.

इन्द्रं कुत्सो दचहगं शचीपतिं काटे निबाडह ऋषिरह्वदूतये ॥

१ । १०६ । ६

Ṛisi Kutsa thrown into a well invoked *Indra* for aid, the slayer of *Vṛitra* and lord of *Çachī* (= valorous deeds).—I, 106-6.

While citing this example I am aware that this *Kutsa* himself has been by some scholars taken for a mythic personage and even a form of fire. But if "*Ṛiṣi Kutsa*" be so taken we will have to deal with similarly many a well-known historical character. Fortunately such extreme views are gradually disappearing. They were the results of the confusion of two sides of many of the characters of the Rigveda of which one is the human and the other the divine or the demoniac. The one representing the career of beings while living as men on earth —whether as Aryans or non-Aryans—as good or bad men. The other representing the character of the same beings after death. Some became gods—some a sort of demi-gods, others, again, more or less malignant demons.

As regards the several points raised by Professor Macdonell in connection with *Yāska's* interpretation of *ṛik* I, 105-17, the first two can only be briefly answered here. For they relate to the whole question of the belief of the Vedic *Ṛiṣis* regarding the god of the atmosphere. This can be attacked only after a great deal of preliminary work has been gone through.

It is well known to the readers of the Rigveda—both of the east and of the west—that the oldest god of this region was *Vāta* or *Vāyu*. The whole space between heaven and the earth was believed to be filled with air, and the air was a god. His two most important attributes were "blowing" and "pervasiveness." The importance of this god was afterwards very much lessened and a new god of a different character named *Trita* became the ruler of the mid-region. In course of time *Trita* also fell down from this high position. He was displaced by *Indra*, the most warlike of the Rigvedic gods. The new gods *Trita*, *Indra* and few others differed from the older gods *Dyaus*, *Prithivi*, *Surya*, etc., in one very important respect. The older gods were identical with some physical objects—each having a physical basis behind him. In fact they were what the western scholars call the mythological gods. The new gods were of a different nature. *Trita* or *Indra*, for example, was the ruler of the mid-region but there was nothing there—neither the air, the clouds, the lightning nor the space itself—with which these gods could be identified. This fact appears most prominently in Hymn 12 of the II *mandal* where the *Ṛiṣi* is most eloquently trying to prove the existence of *Indra* to the sceptical people—probably a large number of people, for the *Ṛiṣi* in addressing them uses the word जनासः—who found it difficult to believe in him as they could not point out any object in nature and say *this was he*.

There is nothing in the Rigveda to shew that *Trita* and *Indra* as gods were ever believed to be in distress or that they themselves were overwhelmed with darkness. It is the physical nature that is covered with darkness, and this *Indra* drives away. The mid-region—the hollow between the heaven and the earth—has never been considered as in any way an unwelcome place—a dark cavern or a lurking place—so far as the god residing there is concerned—from which he wished to be rescued. This is clear from *ṛik* X, 8-7 itself. The place has been mentioned as "पित्रोरुपस्थे" lap of the parents—the heaven and the earth. It is simply impossible that the *Ṛiṣi* would use such language with regard to a place from which *Trita* would pray to the gods to be rescued. And if in *ṛik* I, 105-17 *Trita* be the god of the atmosphere, his praying to other gods to be rescued from the darkness by which he has been overwhelmed would be an absurdity. For, the driving of darkness is the special function of the atmospheric god. Then if the mid-

region be the lurking place—or the well—what was the wide open place where *Trita* was placed after having been rescued by *Bṛihaspati*? Moreover we should remember that the mid-region has been spoken of as the dear home of *Indra*—the greatest and the most beloved god of the *Ṛiṣis*. The fact is, Professor Macdonell has misunderstood the words "वव्रे अन्तरिक्ष्यौतिं" in *ṛik* X, 8-7 and thereby been thrown into a great confusion. I take up therefore this *ṛik* and the one that immediately follows it.

3. अस्य त्रितः क्रतुना वव्रे अन्तरिक्ष्यौतिं पितुरेवैः परस्य ।
सचस्यमानः पित्रोरुपस्थे जामि ब्रुवाण आयुधानि वेति ॥ १० । ८ । ७

4. स पित्र्याण्यायुधानि विद्वानिन्द्रेषित आप्त्यो अभ्ययुध्यत् ।
त्रिशीर्षाणं सप्तरश्मिं जघन्वान्त्वाष्ट्रस्य चित्निः सस्रजे त्रितो गाः ॥ ८

Professor Macdonell translates the two *riks* thus :

"By his (Agni's) might Trita, within his lurking place seeking a prayer to (his) supreme father in his wonted way, being cherished in the lap of his parents calling the weapons akin, goes forth"—X, 8-7.

"He Aptya knowing (his) paternal weapons, urged by Indra fought against (the demon). Having smitten the three-headed, seven-rayed (Tvāstr) Trita has released the cows of the son of Tvāstr"—8.

As to this translation, it should be noted in the first place, that according to the rules of construction of sentences in the Rigveda **अस्य पितुः परस्य** in the first line should be taken together. Even if it be allowed to take **अस्य** alone with **क्रतुना** and **पितुः परस्य** with **धौतिं** this last sentence cannot be rendered into "a prayer to his supreme father." Had the *Ṛiṣi* meant this he would have put the supreme father in the dative instead of in the genitive case as he has done. As regards the use of the dative the *Ṛiṣis* were very particular. Then who is this "supreme father"? If the great **द्यौः** is meant, what are his weapons? "Calling the weapons akin," again, hardly makes any sense.

Lastly, as stated before, Professor Macdonell has misunderstood the expression **"वव्रे अन्तरिक्ष्यौतिं."** To find out its true meaning and why it has been used here, it will be necessary to remember some facts regarding an incident known as "the winning of the cows by *Indra*." There is no incident in the whole of the Rigveda which has been mentioned so often and with so much enthusiasm as this. One cause of Professor Macdonell failing to understand the expression under discussion here is his not paying proper attention to this incident. He is wrong in saying in his Vedic Mythology (p. 63).

"Another myth which is not often mentioned and the details of which chiefly occur in a single hymn (10,108) is that of the capture by *Indra* of the cows of the Paṇis (§67)." The *Paṇis* had concealed the cows in a dark cavern closed by two doors above and one below, and the approaches of the place were so altered as to mislead anybody looking at them. *Indra*, *Bṛihaspati* and *Ayāsya* at the head of the *Angiras* family were long in search of them. At last with the help of a female called सरमा they found out the place. Then, one evening, they came there in a body and broke the cave. Early next morning they opened the doors, let in the rays of the sun and brought out the cows.

The winning of these cows of the *Paṇis* was typical of all subsequent conquest of cows by the Aryan leaders, and the language used in connection with this incident, especially expressions like "the breaking of the rock or rocky cow-pen," "lighting up the dark cavern," etc., were used in describing all conquest of cows in later times. And this was the case even when the scene of action was transferred from the earth to the region of the clouds, and by गौः was meant not "a milch cow" but figuratively "light" or "water."

The word वव्रः is derived from the root वृ to cover and means a hiding place, a cavern, a cave. The phrase वव्रे क्षन्तः occurs in four places in the Rigveda, namely, IV, 1-13; V, 31-3; VII, 104-3 and the present *ṛik* X, 8-7. In VII, 104-3 *Indra* and *Soma* have been asked to throw the evil-doer into वव्रे क्षन्तः अनारम्भणे तमसि—a bottomless dark cavern. In the first two *ṛiks* milch cows concealed in वव्रे क्षन्तः—dark cavern—are said to have been released. I have no doubt in the present *ṛik* also वव्रे क्षन्तः refers to the dark cavern where the cows of the son of *Tvastā* were confined. This shews the relation of *ṛiks* 7 and 8. *Rik* 7 speaks of the preparation preliminary to the attack of the place where the cows had been concealed, and *Ṛik* 8 of the actual conquest.

This brings us to the word धीति। The word is ordinarily derived from धी to meditate and it then means primarily "thought." One of its secondary meanings is a hymn, a composition in praise of a god, a prayer In the present *ṛik* the word is not so derived. Here it is derived from धी a form of दी to shine, and the word धीति means light. "वव्रे क्षन्तः धीतिं दृक्षन्" of this *ṛik* is exactly the same thing as "तमसि ज्योतिरिक्षन्" of *ṛik* X, 67-4.

अवो द्वाभ्यां पर एकया गा गुहा तिष्ठंतीरन्वतस्य सेतौ।
बृहस्पतिस्तमसि ज्योतिरिक्षन्नदुह्रा आकर्वि हि तिस्र आवः।
१० । ६७ । ४

The cows were confined in a cave—the place of falsehood —by two doors on the lower and one on the upper side.

Wishing light in darkness (*i.e.*, to light up the dark place) Bṛihaspati broke open the three doors and brought out the milch cows—X, 67-4.

It was not *Trita* who was lying in the dark cavern, and he did not pray to his supreme father to be rescued himself. It was the cows of the son of *Tvastā* that were hidden in the वलः and like the cows of the *Paṇis* and *Trita* wanted light within it as *Brihaspati* wanted light in the other case—X, 67-8.

The supreme father is the sun which the *Ṛisis* believed to be a form of fire. This shews why these two *ṛiks* are inserted in an *Agni* hymn. In another sense it is King *Vivasvān*, one of the ancestors of *Trita*.

The "एवैः" I take in the sense of गन्तृभिः मरुद्भिः—by the swift moving *Maruts*, as *Sāyaṇa* has explained it elsewhere. The expression "जामि ब्रुवाण" I explain as "speaking of his kinship," *i.e.*, of his (*Trita's*) descent from *Vivasvān*. By "आयुधानि" I understand "ज्वाला" flames, as explained by *Sāyaṇa* in a number of places.

I now give my translation of the two *ṛiks*:

By the might of his supreme father, *Trita* wished light within the dark cavern.

Adored by the swift moving *Maruts*, in the lap of the parents (*i.e.*, of the heaven and the earth = in the mid-region), he spoke of his kinship (with *Vivasvān* = the sun) and obtained light—X, 8-7.

Āptya Trita having obtained his paternal weapons (*i.e.*, rays of the sun) and urged by *Indra* fought against (Tvāstra).

He slew the three-headed, seven-rayed. *Trita* drove away the cows even of the son of *Tvastā*.

The वलः of X, 8-7 has, therefore, nothing to do with the कूपः of *ṛik* I, 105-17. Let us see if the उत्सः of *ṛik* X, 45-2 has anything to do with it.

विद्मा ते अग्ने त्रेधा त्रयाणि विद्मा ते धाम विभृता पुरुत्रा ।

विद्मा ते नाम परमं गुहा यद्विद्मा तमुत्सं यत आजगंथ ॥ १०।४५।२

We know, O *Agni*, your three forms in three places; your abodes scattered over many places.

We know your highest name which is hidden. We know the spring from which you have come—X, 45-2.

This उत्सः spring is the aerial sea from the waters of which *Agni* in the form of lightning is born and on account of which he is known as अपां नपात् the son of waters [Rigveda and Avesta]. It is *Agni's* mother's womb—in the words of the

Vedic *Risis*—the best place in the universe. This therefore cannot be the कूपः of *ṛik* I, 105-17 from within which *Trita* had to be rescued.

The distant place of *ṛiks* VIII, 47, 10 to 16, will be explained when we come to these.

(*c*). *Trita is a sacrificer. He prepares Soma liquor and offers it to the gods as libation.*

We now come to a number of *ṛiks* of the IX *mandal* or the *Soma* Book in which *Trita* appears in the character of a sacrificer who prepares the *Soma-juice* and offers it to the gods. On a comparison of these *ṛiks* with those quoted from the same Book in my paper on *Vivasvān*, it will be seen that the relation of *Trita* to *Pavamāna Soma* is exactly the same as that of *Vivasvān* to that exhilarating liquor, the favourite drink of both the immortal gods and the mortal men. We will see later on that according to the Avesta, *Vivasvān* was the first to prepare the corporeal *Soma* (the terrestrial *Soma* liquor), and *Trita* was the second man who did it.

Professor Macdonell has failed to see this clear indication of the human side of *Trita's* character by his incorrect construction (अन्वयः) of *ṛik* IX, 32-4 and the misinterpretation of the word सानु in it. I will come to this in due course.

5. आदीं त्रितस्य योषणो हरिं हिन्वन्त्यद्रिभिः ।

इन्दुमिन्द्राय पीतये ॥ ९ । ३२ । २

Then him the tawny-coloured one (=*Soma*), the maidens of *Trita* with the help of the grinding stones, are sending forth.

(Sending forth) *Indu* (=that which is dropped into the *kalaçi* from the filter=*Soma*) for Indra's drinking—IX, 32-2.

6. भुवत्त्रितस्य मर्ज्यो भुवदिन्द्राय मत्सरः ।

सं रूपैरज्यते हरिः ॥ ९ । ३४ । ४

He was groomed by *Trita*. He exhilarated *Indra*.

The tawny-coloured one was anointed with beauties—IX, 34-4.

7. स त्रितस्याधि सानवि पवमानो अरोचयत् ।

जामिभिः सूर्यं सह ॥ ९ । ३७ । ४

He, the *Pavamāna* (=*Soma* that is being purified), on the ridge (=filter which is kept on a high place above the kalaçi for collecting the *Soma*) joined with *Trita's* maidens, made the sun shine—IX, 37-4.

I now give Professor Macdonell's rendering of the *ṛik*.

"He, *Pavamāna*, upon the summit of *Trita* has caused the sun along with the sisters to shine"—IX, 37-4.

This leaves **जामिभिः** quite unconnected. Professor Macdonell thinks **जामिभिः** refers to "the seven rays of the sun." Ludwig thinks they are "the dawns." Griffith is of the same opinion.

The *rik* itself is not at all a difficult one. The difficulty is the creation of *Sāyaṇa* who, first in shewing the connection of the words in it (in rendering the **अन्वयः**), connected **त्रितस्य** with **अधि सानवि** instead of with **जामिभिः** as he ought to have done. The authorities mentioned above though they have not accepted his explanation either of "**अधि सानवि**" or of "**जामिभिः**" have evidently relied on him for the **अन्वयः** of the *rik*. The mistake could have been avoided had attention been paid to two important facts, namely—

1° "**अधि सानवि**" occurs in a number of *riks* of the IX *mandal* in the sense of "*on the ridge of the filter*" and does not bear any special relation to the high place which *Trita* as god of the mid-region occupied.

2° "**जामय**" here must, as other *riks* shew, be connected with *Trita*.

1° Use of the phrase **अधि सानवि**(= **सानौ** as **विष्णवि** = **विष्णौ**) in other *riks*.

तं सानावधि जामयो हरिं हिन्वन्त्यद्रिभिः ।
हर्यतं भूरिचक्षसं ॥ ९ । २६ । ५

Him, the tawny-coloured one, beloved and many-eyed (=all-seeing), the sisters are sending on to the ridge of the filter by means of the grinding stones—IX, 26-5.

शुचिः पुनानस्तन्वमरेपसमग्ये हरिर्न्यधाविष्ट सानवि । ९ । ७० । ८

Soma with his shining tawny-coloured body is placed on the ridge of the filter made of sheep's wool—IX, 70-8.

Sāyaṇa thus explains the expression "**अग्ये सानवि**" in this *rik*.

"सानवि सानुनि समुच्छ्रितः अग्ये अविवालक्षते दृषा पवित्रे ।"
अत्यो न हियानो अभि वाजमर्ष स्वर्वित्कोशं दिवो अद्रिमातरं ।
दृषा पवित्रे अधि सानो अव्यये सोमः पुनान इन्द्रियाय धायसे ॥
९ । ८६ ३।

Like a horse going to the battle, go on, O Finder of light (=*Soma*), from heaven(=high place=filter) to the vat made of wood.

The bull *Soma* is purified on the ridge of the filter made of sheep's wool for the nourishment of *Indra*—IX, 86-3.

राजा समुद्रं नद्यो वि गाहतेपामूर्मिं सचते सिन्धुषु श्रितः ।
अध्यस्थात्सानु पवमानो अव्ययं नाभा पृथिव्या धरुणो महो दिवः ॥ ८

The king (=*Soma*) bathes in the waters as rivers flow into the sea. Resting on the sea he plays with the billows.

Soma, the holder of the great sky, while being purified sits on the ridge of the filter made of sheep's wool, in the central place of the earth—8.

असर्जि वक्वा रथ्ये यथाजौ धिया मनोता प्रथमो मनीषाँ ।
दश स्वसारो अधि सानो अव्यो जन्ति वह्निं सदनान्यच्छ ॥ ९ । ९१ । १

With hymns, the first inventor and inspirer of hymns, the sage (=*Soma*), has started as for a race of chariots.

The ten sisters on the ridge of the filter, made of sheep's wool, are driving the car to the different resting places—IX, 91-1.

तव त्ये सोम पवमान निण्ये विश्वे देवास्त्रय एकादशासः ।
दश स्वधाभिरधि सानो अव्ये मृजन्ति त्वा नद्यः सप्त यह्वीः ॥ ९ । ९२ । ४

Those all-gods, thrice eleven, O *Soma*, who is being purified, are anointing you in your secret place.

The ten with their powers are anointing you on the ridge of the filter, made of sheep's wool, and the seven mighty rivers are doing the same—IX, 92-4.

Remarks:—The secret place mentioned here is the space between the two leaves of the *Soma*-pressing mill-stone—Cf. *Rik* IX, 102-2.

पवस्व सोम मधुमाँ ऋतावापो वसानो अधि सानो अव्ये ।
अव द्रोणानि घृतवन्ति सीद मदिन्तमो मत्सर इन्द्रपानः । ९ । ९६ । १३

Flow *Soma* sweetened with honey, full of truth, clothed in waters, on the ridge of the filter made of sheep's wool.

Then rest on the wooden vats full of *ghrita* as the most exhilarating cheering drink of *Indra*—IX, 96-13.

अभि प्रियाणि पवते पुनानो देवो देवान्त्सख्येन रसेन पृञ्चन् ।
इन्दुर्धर्माण्यृतुथा वसानो दश क्षिपो अव्यत सानो अव्ये ॥ ९ । ९७ । १२

As he is purified he flows towards the clear waters. The god (*Soma*) sprinkles the (other) gods by his own juice.

Indu, having clothed himself with sacred rites in the proper season, has met on the ridge of the filter, made of sheep's wool, the ten fingers—IX, 97, 12; *cf.* IX, 97-16; 21; 40.

2° *The Evolution of the idea of* जामयः.

This subject has been dealt with at length in my paper on *Vivasvān* (pp. 27—30). I quote below some of the remarks there made:

i. In the preparation of the *Soma*-juice—*Soma-madhu*—from the shoots of the *Soma* plant—*aṁçu*—the first stage was to pound the shoots with the grinding stones—*adribhih*. This was done with the ten fingers of both hands. This simple fact has been expressed in the poetic language of the Rigveda as "king *Soma* being clasped by ten—the ten fingers of both hands—by ten maidens—by ten maiden sisters."

ii. The pounded shoots were then steeped in water and allowed to ferment. The liquid thus obtained was poured over a filter made of sheep's wool. The filtration was known as "*punāna*," purification. In the Vedic language this was "king *Soma* being मज्जे rubbed, cleansed or anointed by ten maiden sisters."

As *Vivasvān* and *Trita* were the earliest worshippers of *Soma* "the ten fingers were represented as their daughters."

गभस्त्योः । ९ । ८६ । ३४ .

Soma is purified with the hands—IX, 86-34.

तमीमण्वीः समर्य आ गृभ्णन्ति योषणो दश ।

स्वसारः पार्ये दिवि । ९ । १ । ७

Him (=*Soma*) on the brewing day, the fingers—the ten maidens who are sisters—clasp.—IX, 1-7.

मृजन्ति त्वा दश क्षिपो हिन्वन्ति सप्त धीतयः ।

अनु विप्रा अमादिषुः । ९ । ८ । ४

The ten swift fingers anoint you; the seven ministers pour you out and the sages drink you and get exhilarated—IX, 8-4.

यमत्यमिव वाजिनं मृजन्ति योषणो दश ।

वने क्रीळन्तमत्यविं ॥ ९ । ६ । ५

On his passing on to the woollen filter ten maidens anoint him like a vigorous steed playing in a forest—IX, 6-5.

तं सानावधि जामयो हरिं हिन्वन्त्यद्रिभिः ।

हर्यतं भूरिचक्षसं ॥ ९ । २९ । ५

Him of tawny colour, beloved and many eyed (=all seeing), the sisters are sending on by means of the grinding stones—IX, 26-5.

आदीं चितस्य योषणो हरिं हिन्वन्त्यद्रिभिः ।
इन्दुमिन्द्राय पीतये ॥ ९ । ३२ । २

8. एतं चितस्य योषणो हरिं हिन्वन्त्यद्रिभिः ।
इन्दुमिन्द्राय पीतये ॥ ९ । ३८ । २

Then him the tawny-coloured one (=*Soma*) the maidens (=fingers) of *Trita* with the help of the grinding stones send forth.

(They send forth) *Indu* for *Indra's* drinking,—IX, 32-2.

IX, 38-2. *Same* as—IX, 32-2.

9. मनीषिभिः पवते पूर्व्यः कविर्नभिर्यतः परि कोशाँ अचिक्रदत् ।
चितस्य नाम जनयन्मधु क्षरदिन्द्रस्य वायोः सख्याय कर्त्तवे ॥
९ । ८६ । २०

The first of the poets (=*Soma*) purified by wise leaders, falls roaring on to the vat. May the nectar, uttering the name of *Trita*, flow for the sake of his friendship with *Indra* and *Vāyu*—IX, 86-20

Remarks :—*Soma* flows uttering the name of *Trita* as the latter was one of the first pressers of it.

10. तं मर्मृजानं महिषं न सानावंशुं दुहन्त्युक्षणं गिरिष्ठां ।
तं वावशानं मतयः सचन्ते चितो बिभर्ति वरुणं समुद्रे ॥
९ । ९५ । ४

They (=the *Ritvigs*) are milking on the ridge (=filter) like a groomed buffaloe, the twigs of *Soma*—the sprinkler staying in the mountain (=the grinding stone).

The hymns worship him who longs for them. *Trita* places *Varuṇa* (=*Soma* liquor) in the ocean (=*Kalaçi* or vat.)—IX, 95-4.

11. उप चितस्य पाथ्योरभक्त यद्गुहा पदं ।
यज्ञस्य सप्त धामभिरध प्रियं ॥ ९ । १०२ । २

He (=*Soma*) occupied the two grinding stones of *Trita*—the dear secret place—after having gone through the seven abodes of the sacrifice—IX, 102-2.

12. त्रीणि त्रितस्य धारया पृष्ठेष्वेरया रयिं ।
मिमीते अस्य योजना वि सुक्रतुः ॥ २

Bring wealth on your back by the three streams of *Trita*.
The good sacrificer sings his (*Soma's*) praises—3.

Remarks:—The streams of the *Soma* liquor have been called after *Trita's* name on account of the latter having been one of the earliest *Soma*-sacrificers. Three streams are mentioned probably because *Trita's* name is connected with the number three.

(c) *Trita offers Soma libation to Indra.*

13. अस्य सुवानस्य मन्दिनस्त्रितस्य न्यर्बुदं वावृधानो अस्तः ।
अवर्तयत्सूर्यो न चक्रं भिनद्बलमिन्द्रो अङ्गिरस्वान् ॥ २ । ११ । २०

Invigorated by the exhilarating *Soma* brewed by *Trita*, he (=*Indra*) cast down *Arbuda*.

Indra whirled his wheel as the sun (does his) and united with the *Angirases* shattered *Vala*—II, 11-20.

Trita is a sacrificer here. He prepares *Soma* and offers it to *Indra* who strengthened by this invigorating drink slew the *Dās Arbuda*.

It is not clear what was the wheel that *Indra* wielded. It could not be one of the wheels of the sun's chariot as suggested by Griffith. For the word *Surya* is in the nominative. One of the weapons with which Indra armed himself while fighting was probably a wheel. His friends and followers—the Maruts—the Daçagva Angirases were so armed.

(d) *Trita adores Agni.*

14. वृषो अस्तोषि भूम्यस्य गर्भं चितो नपातमपां सुवृक्ति ।
गृणीते अग्निरेतरी न शूषैः शोचिष्केशो नि रिणाति वना ॥
५ । ४१ । १०

I *Trita* praised with beautiful words the child of the sprinkler of the earth—the son of waters (=*Agni*).

Agni with might neighs like a charger. The flame-haired one (=*Agni*) is destroying the forests—V, 41-10.

Remarks:—There are several difficulties in connection with this *rik*. The first is as regards the subject of the first line. We have *Trita* in the nominative singular indicating that he is the subject. But when we come to the verb we find that it (अस्तोषि) is in the first person whereas the nominative चितः is in the third person. The difficulty has been attempted to solve in several ways. Ludwig, Bergaigne and Griffith have

taken अस्तोषि first person singular for अस्तौष्ट third person singular. Professor Macdonell has taken चितः nominative singular for चितं accusative singular. *Sāyaṇa* has removed चितः altogether from the first line and made it an adjective of *Agni* in the second line. It cannot be said that these attempts have been quite successful. The most natural way to proceed would be to see if the sentence would make any sense without altering any of the words. I think it would do so if we would take अहं the subject indicated by the form of the verb and चितः both as the subject of the sentence. We would then get for the subject अहं चितः a form not uncommon in the Rigveda. An instance of it we will get below. See 32 (X. 48. 2). Now if this be the construction of the sentence what does it mean? It means that the composer of the hymn has here made चितः as the speaker. We have seen him represented as a sacrificer. It is, therefore, not unnatural that he would be made to say he had adored *Agni* with beautiful hymns. Here we have two *riks*, in one of which (V, 41-9) चितः is adored as god and in the other an explanation is given as to how he attained to divinity.

In translating दृष्णः भूम्यस्य गर्भे I have followed *Sāyaṇa*, differing from Professor Macdonell and Griffith. These authorities have rendered दृष्णः "भूमस्य" into "of the terrestrial hero, *i.e.*, of *Agni*." No objection can be urged against this meaning. But when we come to दृष्णः भूम्यस्य गर्भे this rendering is reduced to an absurdity. The गर्भे here = अपां नपातं = अग्निं। Now if दृषा भूम्यः is अग्नि. what does दृष्णः भूम्यस्य गर्भे or अग्नेः अग्निं mean? Say these authorities that गर्भः here means "germ" and दृष्णः भूम्यस्य गर्भः is the germ of the terrestrial hero *Agni*. A little consideration will shew that this is simply concealing from ourselves an absurdity by the use of the English equivalent of a Sanskrit term instead of using the Sanskrit term itself. The S. word गर्भः has been used in the Rigveda in two different senses, namely, "the womb containing the fœtus," and "the fœtus contained in the womb." When the word is used in the latter sense it can be rendered in English into "germ." For the fœtus is the undeveloped state of the being that will grow out of it. But in the use of the two terms "गर्भः" and "germ" there is this difference. We can speak of the गर्भः of the being that bears it and not of the being that will come out of it. On the other hand we can speak of the germ of the being that will be born and will grow. This will be clearly seen if we will use the word fœtus or child instead of the term germ. In दृष्णः भूम्यस्य गर्भः both दृषा भूम्यः and गर्भः cannot refer to the same thing, namely, अग्निः। अपां नपात् and दृष्णः भूम्यस्य गर्भः mean very much

the same thing. The first expression means the child of celestial waters when born, *i.e.*, lightning (see Ṛik III, 29. 11, and my paper on Matariçvā). The other expression means *Agni* existing as fœtus in the rain water or the cloud that sprinkles the earth.

It was, I believe, Max Müller who first rendered "गर्भः" into germ in his translation of the हिरण्यगर्भ Hymn (X, 121). But here "गर्भः" does not mean even a child or fœtus. हिरण्यगर्भः is हिरण्यः हिरण्मयः-"गर्भः" यस्य सः—he bearing the golden womb. The womb was golden for it has produced this beautiful world. The word "गर्भ" here was taken by Max Müller first for a child and then for a germ, on account, no doubt, of the word "जातः" born following it. हिरण्यगर्भः was born and therefore was a child. But "जातः" here does not mean ordinary birth. Here it means "manifested" (II, 12-14; V, 14; V, 15-2; X, 129-3). The Supreme Being—the तदेकं of X, 129—became हिरण्यगर्भः—the creator bearing the golden womb. He was not creator before because there was no creation. The creation and His becoming a creator were simultaneous events. Hence the force of Sāyaṇa's rendering जातो जातमात्र एव भूतस्य पतिरेक आसीत् as soon as born He became the one lord of all things.

(*e*) *Trita performs a Horse sacrifice*—I, 163.—This is a hymn on the Horse sacrifice (अश्वमेधः यज्ञः). The highly exaggerated language of this hymn may be compared with the description of the horse of the Horse-sacrifice at T.S.V. 7. 25 or at the beginning of the Brihadāraṇyaka Upaniṣad. We have clear proofs that the Horse-sacrifice originated during the Rigvedic period. There is a hymn giving a description of the Horse-sacrifice performed by King Sudās. The सदसस्पावः the sacrifice in which the *Soma* is brewed a thousand times of *ṛiks* III. 53. 7, and VII. 103. 10 cannot be any thing else than the Horse-sacrifice. A *Ṛiṣi* has been called अश्वमेधः—he who performed the Horse-sacrifice.

There are two *ṛiks* in this hymn that has reference to *Trita*, namely, 2 and 3.

15. यमेन दत्तं त्रित एनमायुनगिन्द्र एणं प्रथमो अध्यतिष्ठत् ।
गन्धर्वो अस्य रशनामगृभ्णात्सूरादश्वं वसवो निरतष्ट ॥ २

16. असि यमो अस्यादित्यो अर्वन्नसि त्रितो गुह्येन व्रतेन ।
असि सोमेन समया विपृक्त आहुस्ते त्रीणि दिवि बन्धनानि ॥ ३

He (the horse of the Horse-sacrifice) was given by *Yama*. *Trita* harnessed him. *Indra* first rode on him.

Gandharva held his bridle. The *Vasus* (*i.e.*, the shining gods) fashioned the horse out of the sun. 2.

You are *Yama*, you are *Āditya*, O horse, you are *Trita* by sacred rites.

You are thoroughly sprinkled with *Soma*. They (=the sages) speak of your three heavenly bonds. 3.

Remarks :—In *ṛik* 2 are mentioned four persons who were the first performers of the Horse-sacrifice, namely, *Yama*, *Trita*, *Indra* and *Gandharva*. As pointed out in my paper on *Vivasvān*, the *Gandharva* mentioned in *ṛik* 2 is King *Vivasvān*. In *ṛik* 3 he has been named *Āditya* or the sun. The names chronologically arranged would be :—

Gandharva Vivasvān,
Yama,
Trita, and
Indra.

The idea of the horse being fashioned out of the sun had its origin in the poetical language of the *Ṛiṣis* in which the sun has been compared with a horse and even called a horse.

There is no mysticism in the third *ṛik* if we keep in mind the way the vedic *Ṛiṣis* reasoned. *Vivasvān*, *Yama* and *Trita* performed the Horse-sacrifice—

∴The horse of the Horse-sacrifice was related to them—

∴When the *mantra* was pronounced the horse became their symbols—nay their very selves.

In *Vivasvān*, *Yama* and *Trita* the horse has three bonds in heaven. Why it has not been stated that the horse became *Indra* when the *mantra* was pronounced and why the latter has not been mentioned as one of the bonds of the horse in heaven, will be explained in my paper on *Indra*.

17. यत्सोममिन्द्र विष्णवि यद्वा घ त्रित आप्त्ये ।
यद्वा मरुत्सु मन्दसे समिन्दुभिः । ८ । १२ । १६

18. यथा मनौ विवस्वति सोमं शक्रापिबः सुतं ।
यथा त्रिते छन्द इन्द्र जुजोषस्यायौ मादयसे सचा ॥ ८ । ५२ । १६

If, O *Indra*, you are enjoying the *Soma*, in the sacrifice of *Viṣṇu* or in that of *Āptya Trita* ;

Or if you are enjoying the purified drops in the sacrifice of the *Maruts*—VIII, 12-16.

As, O *Çakra*, you drank the brewed *Soma* in the sacrifice of *Manu*, the son of *Vivasvān* ;

As, O *Indra*, you loved the hymn in *Trita's* sacrifice, so may you exhilarate in the sacrifice of *Āyu*—VIII, 52-1.

In order to explain a difficulty in connection with the construction of these two *ṛiks* I quote below two other *ṛiks* of a similar character.

यथा मनौ सांवरणौ सोममिन्द्रापिबः सुतं ।
नीपातिथौ मघवन्मेध्यातिथौ पुष्टिगौ श्रुष्टिगौ सचा ॥ ८ । ५१ । १

As, O *Indra*, you drank the brewed *Soma* with *Manu*, son of *Sāmvaraṇā*. As with *Nepātithi*, O *Maghavan*, with *Medhyātithi*, *Puṣtigu* and *Çruṣtigu*—VIII, 51-1.

Remarks:—*Sāmvaraṇi Manu* is the son of *Vivasvān* by his second wife *Sāvarṇā*. He is also called *Vaivasvata Manu* i.e., *Manu* son of *Vivasvān*. He must have been a great sacrificer. For his sacrifices are repeatedly mentioned in the Rigveda. *Nepātithi*, *Medhyātithi*, *Puṣtigu* and *Çrustigu* were also illustrious sacrificers.

एषध्रे मेध्ये मातरिश्वनीन्द्र सुवाते अमन्दथाः ।
यथा सोमं दशापिप्रे दशोण्ये स्यूमरश्मावृजूनसि । ८ । ५२ । २

As you delighted, O *Indra*, in the brewing of *Pṛiṣadhra*, *Medhya*, *Mariçvā*;

Or in the *Soma* of *Daçaçipra*, *Daçoṇya*, *Syūmaraçmi* and *Ṛijunas*—VIII, 52-2.

All these *ṛiks* are similar as regards construction. The proper names in the locative in them may be explained in a number of ways. 1° The locative may be taken in the sense of *nearness*. This is the most general and ordinary meaning. All the locatives in VIII, 12-16 may be explained in this sense, as also मनौ in VIII, 52-1 and VIII, 51-1. 2° The locative may be taken as due to its connection with सचा। सचा and सह mean "with." The noun with which सह is connected is in the instrumental. But that with which सचा is connected may be in the instrumental, dative and locative. And as the noun is often in the instrumental even when सह is merely understood, so the noun may be in the instrumental, dative and locative when सचा is merely understood. All the locatives above may be explained this way excepting चिते in VIII, 52-1. 3° The proper names in the locative in VIII, 52-2 may best be explained as adjective to सुवाने—the brewing of *Soma* by *Pṛiṣadhra*, etc. Such adjectives are very common in the Rigveda. 4° मनौ, विष्णवि, चिते above may also be explained as in the sacrifice performed by *Manu*, *Viṣṇu* and *Trita*. In the *Çatapatha Brahmaṇa*, *Viṣṇu* and other first sacrificers have been identified with sacrifice itself, *e.g.*—

यज्ञो वै विष्णुः ।

Viṣṇu **is verily sacrifice.**

But if this be their construction what do these *ṛiks* mean? Is it a case of a number of gods being praised together by a worshipper and of their regaling with the *Soma* draught together? This cannot be the meaning. For some of the persons mentioned in them are evidently human sacrificers. It cannot be said that the case of the gods mentioned in them should be taken in one sense and that of the men mentioned in a different sense. For the nature of the construction of the *ṛiks* will not allow this. No explanation again will be acceptable unless it will explain all the four *ṛiks*, and the only explanation that will do this is the one that takes all the persons mentioned in the *ṛiks* equally as sacrificers. Even if it be said that *Viṣṇu*, *Trita*, etc., perform sacrifices in heaven—though in these *ṛiks* there is no mention of heaven—that will be an indirect proof that these gods were at one time human sacrificers.

(*f*) *Indirect proof that Trita was a human sacrificer:*

19. यस्मिन्विश्वानि काव्या चक्रे नाभिरिव श्रिता ।
चितं जूती सपर्यत व्रजे गावो न संयुजे युजे अश्वाँ अयुक्षत...॥
८ । ४१ । ६

In whom all poetry rests as the nave rests on the wheel; Serve *Trita* (= Varuṇa) quickly as the cows are tied in the stalls or even as the steeds—VIII, 41-6.

Remarks :—In this *ṛik Trita* is a name for *Varuṇa*. In the Rigveda there are many instances of the gods worshipped being named after their worshippers and the latter being named after the gods.

20. वि यस्य ते जयसानस्याजर धक्षोर्न वाताः परि सन्त्यच्युताः ।
आ रण्वासो युयुधयो न सत्वनं चितं नयन्त प्र शिषन्त इष्टये ॥
१० । ११५ । ४

Your unovercomeable flames, O *Agni*, who wishes to burn the forests, run like winds. The leaders for the fulfilment of their wishes go to the heroic *Trita* (= *Agni*) like gay warriors—X, 115-4.

Remarks :—See under the preceding *ṛik* and also my paper on "*Mātariçvā*."

21. नि षस्त्यासु चितः स्तभूयन्परिवीतो योनौ सीददन्तः ।
अतः संगृभ्या विशां दमूना विधर्मणायन्त्सैरीयते नॄन् ॥
१० । ४६ । ६

Firmly establishing himself in houses, *Trita* (=*Agni*) sat down in the altar surrounded by flames. Thence the lord of the house holding the offerings of the people, took them to the leaders (=gods), without any contrivance, by the mere operation of the Law—X, 46-6.

Remarks:—See under the two preceding *ṛiks*.

22. इमं चितो भूर्यविन्ददिच्छन्वैभूवसो मूर्धन्यघ्न्यायाः ।
स प्रेदधो जात आ हर्म्येषु नाभिर्युवा भवति रोचनस्य ॥
१० । ४६ । ३

Wishing to discover the mighty *Agni*, *Trita*, a descendant of *Vibhuvasu*, found him on the head of the not-to-be-slaughtered (=cow=cloud). *Agni*, the increaser of happiness, was born in every house, and the young god became the centre of the sacrifice—X, 46-3.

Remarks:—The *Vibhuvasu* of this *ṛik* is the same as the *Gandharva Viçvāvasu*, *i.e.*, king *Vivasvān* or the sun. *Cf. ṛiks* X. 85. 22; X. 139. 4. In my papers on *Vivasvān* and *Yama*, it has been shewn that it was *Mātariçvā*, who, as messenger of *Vivasvān*, first gathered fire from lightning. *Yama* has also been said to have found *Agni* in the waters of the aerial sea. In this ṛik the same thing has been said of *Trita*. The significance of these statements will be pointed out when I shall deal with the general career of *Trita's* character.

II. *Trita as god*:—

23. उत वः शंसमुशिजामिव श्मसि ह्यहिर्बुध्नयो ज एकपादुत ।
त्रित ऋभुक्षाः सविता चनो दधेऽपां नपादाशुहेमा धिया
शमि ॥ २ । ३१ । ६

And we desire the hymn that praises you as if it were a charming (woman). May *Ahirbudhna*, *Aja Ekapād*, *Trita*, *Ṛibhukṣan*, *Savitā* and the swift-moving *Apām Napāt* (son of waters=lightning) give us food for our hymn and sacred rites —II, 31-6.

Remarks:—*Ahirbudhna* is the *Ahi* of the atmosphere. A *Dās Ahi* has been repeatedly mentioned in the Rigveda as well as in the Avesta. He seems to have blocked a river and killed *Yama*. *Trita* is said to have killed him. This act like some other acts of *Trita* was afterwards ascribed to *Indra*. When *Trita* and *Indra* were, after their death, deified and transferred to the mid-region, *Ahi* was also taken there and deified. He was now called *Ahirbudhna*, *i.e.*, *Ahi* of the *antarikṣam*; later on conceived as *Ahi* living on the other side of the earth.

It is not necessary for our purpose to explain the meanings of the other gods mentioned here. It may be stated, however, that the *Aja Ekapād* is neither the one-footed goat nor the sun with one foot. The *Aja* unborn is one of the names given to the God when the Vedic *Ṛiṣis* got glimpses of Monotheism. He was called *Ekapād* for reasons given in Hymn X, 90 (see my paper on the *Pitṛis*, p. 2).

24. अध स्म यस्यार्चयः सम्यक्संयन्ति धूमिनः ।
यदीमह त्रितो दिव्युप ध्मातेव धमति ष्मिषीते ध्मातरि यथा ॥
५ । ९ । ५

The flames of the smoky one (= *Agni*) diffuse in all directions when *Trita* in heaven sharpens him as a smith blows him in the furnace—V, 9-5.

Trita here is the god of the atmosphere, and the *Agni* kindled by him is the lightning. It should be noted that in this as also in the preceding *rik* a distinction has been drawn between *Trita* and lightning. The latter is simply an instrument in the hands of the former.

25. प्र सक्षणो दिव्यः कण्वहोता त्रितो दिवः सजोषा वातो अग्निः ।
पूषा भगः प्रभृथे विश्वभोजा आजिं न जग्मुरास्वश्वतमाः ॥
५ । ४१ । ४

Victorious heavenly *Trita*, of whom *Kaṇva* is the invoker, and who is a favourite of *Dyaus*, *Vāta*, *Agni*, *Pūṣā* and *Bhaga*, has come to the sacrifice as a man who commands all enjoyments and possesses the swiftest racers, comes to the race.—V, 41-4.

Remarks :—With विश्वभोजाः compare इमे भोजा अङ्गिरसो &c., III, 53-7.

26. तुजे नस्तने पर्वताः सन्तु स्वैतवो ये वसवो न वीराः ।
पनित आप्त्यो यजतः सदा नो वर्धान्नः शंसं नर्यो अभिष्टौ ॥
५ । ४१ । ९

May the self-moving *Parvatas*, who are heroes like the *Vasus*, be liberal to us and give us children.

May *Āptya* ever praised and adored by us—the friend of man—make our hymn prosper in this sacrifice—V, 41-9.

27. नरा वा शंसं पूषणमगोह्यमग्निं देवेद्धमभ्यर्चसे गिरा।
स्तूर्यामासा चन्द्रमसा यमं दिवि चित्रं वातमुषसमक्तुमश्विना ॥
१० । ६४ । ३

I glorify by hymns *Narāçaṁsa*, *Pūṣaṇa*, the unconcealable *Agni* kindled by the gods, the sun and the moon the measurers of time, *Yama*, *Trita* in heaven, *Vāta*, *Uṣā*, Night and the *Açvins*—X, 64-3.

Remarks :—For the meaning of **नराशंसः** see *ṛik* III, 29-11—**नराशंसो भवति यद्विजायते**। **अर्चसे** for **अर्चै**। The *Agni* that cannot be concealed is, of course, the sun (*cf.* I, 161-13). The sun is also separately mentioned, but that is from another point of view.

III. *Two important conquests of Trita* :

I, 52 is a hymn addressed to *Indra*. Only one out of the 15 *ṛiks* contained in it refers to *Trita*, namely the fifth.

28. अभि स्वरन्ति मदे अस्य युध्यतो रघ्वीरिव प्रवणे सस्रुरूतयः।
इन्द्रो यद्वज्री धृषमाणो अन्धसा भिनद्बलस्य परिधीँरिव त्रितः ॥
१ । ५२ । ५

On the fighting one (=*Indra*) getting exhilarated his helpers (=the *Maruts*) ran against the withholder of rain (=*Vritra*) like streams rushing down a slope.

When *Indra* the thunder-bearer, emboldened by the *Soma*-juice, rent him as *Trita* rent asunder the enclosure of Vala —I, 52-5.

This *ṛik* says that *Trita* had broken the enclosure of *Vala* in which the *Paṇis* had hidden the cows. This must have been a well-known fact for with it has been compared the killing of *Vritra* by *Indra* (Prof. Macdonell).

Hymn V, 86 is on the gods *Indra* and *Agni*. It contains six *riks* of which the first refers to *Trita*.

29. इन्ताग्नी यमवथ उभा वाजेषु मर्त्यं।
दृढा चित्स प्र भेदति द्युम्ना वाणीरिव त्रितः ॥ ५ । ८६ । १

That mortal whom both of you, O *Indra* and *Agni*, protect in battles, shatters even the strongest treasure as *Trita* broke the enclosure—V, 81-1.

Remarks :—As in the previous *ṛik* so in this also a comparison has been made with the breaking of the enclosure of *Vala* by *Trita*. The appropriateness of the comparison here lies in

this : when a frail human being is helped by *Indra* and *Agni* he breaks the strongest treasure as *Trita* broke the enclosure elsewhere described as **दृढ़ा चित् गुहां ; अद्रिं ; अश्मन्मयं व्रजं** &c.

3 and 4.

अस्य चितः क्रतुना वव्रे अन्तरिच्छन्धीतिं पितुरेवैः परस्य ।
सचस्यमानः पित्रोरुपस्थे जामि ब्रुवाण आयुधानि वेति ॥ १० । ८ । ७
स पित्र्याण्यायुधानि विद्वानिन्द्रेषित आप्त्यो अभ्ययुध्यत् ।
त्रिशीर्षाणं सप्तरश्मिं जघन्वान्त्वाष्ट्रस्य चिन्निः ससृजे चितो गाः ॥ ८

By the might of his supreme father (=the sun) *Trita* wished light within the dark cavern.

Adored by the swift-moving *Maruts* in the lap of the parent (*i. e.*, of the heaven and the earth = the **अन्तरिक्षं**, the mid-region) he spoke of his kinship (with *Vivasvān*—the sun) and obtained light—X, 8-7.

Aptya Trita having obtained his paternal weapons (=rays of light) and urged by *Indra* fought against (*Tvāstra*). He slew the three-headed and the seven-rayed :—*Trita* drove away the cows even of the son of *Tvastā*—X, 8-8.

Remarks :—These two *riks* have already been explained in connection with the falling of *Trita* into a well. I, however, purposely avoided making one remark there which should be made now. Two incidents, which have almost throughout the Rigveda been kept distinct, have been here confounded with one another. These are : 1° The winning of the cows concealed by the *Paṇis*. 2° And the releasing the river blocked by *Vṛitra*, also called *Ahi*. Ṛik X, 8-7 speaks of the preparations made for obtaining the cows, but the next *ṛik* refers to the conquest of *Vṛitra* or *Ahi* by *Trita*. The **गाः** in the second *ṛik* = waters. The confusion has been created by the deification of *Trita* and the transference of the scene of his action from the earth to the mid-region.

Following the western scholars I have rendered **क्रतुना** in *ṛik* X, 8-7 into "by might." But the real meaning of **क्रतु** here is sacrifice—the Horse-sacrifice performed by King *Vivasvān*.

30. **पितुं नु स्तोषं महो धर्माणं तविषीं ।**
यस्य त्रितो व्योजसा वृत्रं विपर्वमर्दयत् ॥ १ । १८७ । १

I shall soon glorify the mighty drink, the holder of power (=*Soma*) ;

By whose energy *Trita* rent *Vṛitra* limb by limb—I, 187-1.

31. **स इद्दासं तुवीरवं पतिर्दन्यूषलक्तं त्रिशीर्षाणं दमन्यत् ।**
अस्य त्रितो न्योजसा वृधानो विषा वराहमयोअग्रया हन् ॥
१० । ९९ । ९

He (=*Agni*) the lord of the house verily slew the loud-roaring, six-eyed and three-headed Dāsa.

By his energy, indeed, *Trita* killed the boar (=*Vṛitra*) with his iron-tipped fingers—X, 99-6.

The two *ṛiks* quoted above speak of the conquest of *Vritra* by *Trita*. According to *ṛik* I, 187-1 he did it strengthened by the *Soma*-liquor, and according to the other *ṛik* (X, 99-6) by the power of *Agni*.

32. अहमिन्द्रो रोधो वक्षो अथर्वणस्त्वष्टाय गा अजनयमहेरधि ।
अहं दस्युभ्यः परि न्यमृणामा ददे गोत्रा शिक्षन्दधीचे मातरिश्वने ॥
१० । ४८ । २

I *Indra* stopped the chest (= breathing) of the son of *Atharvā*; and for *Trita* generated cows (= waters) over the body of *Ahi*.

I won the wealth of the *Dasyus* and gave the cow-stalls to *Dadhīchi* and *Mātariçvā*—X, 48-2.

Remarks:—Here *Indra* is said to have killed *Ahi* and obtained waters for *Trita*. With गाः अजनयमहेरधि compare I, 32-8.

IV. *Trita is helped by the Maruts:*

33. चित्रं तद्वो मरुतो याम चेकिते एश्रग यदूधरप्यापयो दुज्ञः ।
यद्वा निदे नवमानस्य रुद्रियास्तितं जराय जुरतामदाभ्याः ॥
२ । ३४ । १०

That march of yours, O *Maruts*, appears brilliant when her kinsmen (*i.e* , sons, *i.e.*, you) milked the udder of even *Priçni*.

Or when, O undeceivable sons of *Rudra*, you went to destroy the revilers of your praiser *Trita*—those who wanted to destroy him—II, 34-10.

Remarks:—This is a difficult *ṛik*. I have consulted a number of comments on it. The first line, I think, has been best rendered by Professor Macdonell. As to the second line no better explanation than that of *Sāyaṇa* is forthcoming.

34. अनु त्रितस्य युध्यतः शुष्ममावन्नुत क्रतुं ।
अन्विन्द्रं वृत्रतूर्ये ॥ ८ । ७ । २४

The *Maruts* protected the strength of *Trita* when he fought, and also his sacrifice. They protected *Indra* in his victory over *Vṛitra*—VIII, 7-24.

35. ताँ इयानो महि वरूथमूतय उप ख्येदेना नमसा गृणीमसि ।
चितो न यान्पञ्च होतृनभिष्टय आववर्तदवराच्चक्रियावसे ॥
२ । ३४ । १४

Begging of them spacious houses for protection, we glorify them by this hymn.

Whom armed with shields, *Trita* for sacrificing and for protection elected (as priests) as the inferior five priests are elected.

Remarks:—This *rik* is a very obscure one. The rendering given above is different from that hitherto given. I think, however, it will be found correct. **वरूथ** has been used in the sense of a house in a number of places. Though seven priests have been generally mentioned, five priests have also been referred to in a few places. **अभिष्टि** = **यज्ञ**; here **अश्वमेध**। **आववर्तत्** = **आ** + **अववर्त्तत्**, from **वृतु वरणे**, **दिव**, **निज** aorist. The appropriateness of the election of the *Maruts* as priests will become clear if we will remember the fact mentioned in the 12th verse of this very hymn that they were the **दशग्वाः** who first founded the institute of sacrifice. **चक्रिया** is a vedic form of the third case of **चक्रिय** as appears in verse 9th;—**तपुषा चक्रिया**—by hot **चक्रिय**। **चक्रिय** = like a **चक्र** = a shield. The *Maruts* were armed with spears, and spears and shield go together. They were for this reason called **रुक्मवक्षसः**—armed with shining breast-plates. It is different from **खाद** which is a bracelet; now called **खाड़** in Bengali and in *Hindi*. The *Maruts* were **खादहस्ताः**। **अभिष्टये** = **यज्ञार्थं**। **चक्रिया**=**चक्रियाख्येन आयुधेन युक्तान् यान इति शेषः**।

V. *Trita as the god of the mid-region was displaced by Indra and driven to a distant place.*

36. यदाविर्यदपीच्यं देवासो अस्ति दुष्कृतं ।
चिते तद्विस्वमाप्य आरे अस्मद्धातनानेहसो... ॥ ८। ४७। १३

Evil that has made its appearance and that lies hidden, O gods, place all that evil and sin away from us in *Āptya Trita*. . . . . VIII, 47-13.

37. यच्च गोषु दुःष्वप्न्यं यच्चास्मे दुहितर्दिवः ।
चिताय तद्विभावर्याप्याय परा वहानेहसो... ॥ १४

The evil dream that forebodes misery to our cattle or to us, O daughter of heaven;

That and sin, O bright one (=Dawn) remove far to *Āptya Trita* . . . .14.

38. निष्कं वा घा क्रणवते स्रजं वा दुहितर्दिवः ।

चित्ते दुःष्वप्नं सर्वमाप्ये परि दद्मस्यनेहसो...१५

The evil dream that weaves a necklace of gold coins or a garland, O daughter of heaven, all that evil dream and sin make over to *Āptya Trita* . . . . . **15.**

39. तदग्नाय तदपसे तं भागमुपसेदुषे ।

चिताय च द्विताय चोषो दुःष्वप्नं वहानेहसो...१६

To him whose food that is—whose work that is—and who is sitting near his share—to *Trita* and to *Dvita*, O Dawn, remove that evil dream and sin—16.

Remarks:—In this *ṛik* the most important question is who is *Dvita*? In the whole of the Rigveda the name occurs in two places only, and this is one of them. From its use here all we can infer is—

1° He is associated with *Trita* and lives with him at a great distance.

2° Towards the end of the Rigvedic period the *Ṛiṣis* while asking the gods for the removal of all sorts of evils from them prayed that these might be transferred to the place of *Dvita* or *Trita*.

From what will be stated below *Dvita* may be identified with *Nirṛiti* the goddess of Death. But such identification is not possible. For *Dvita* is a god whereas *Nirṛiti* is a goddess. *Yama* afterwards became the god of Death in place of *Nirṛiti*. Can *Dvita* be *Yama*? The present *ṛik* does not enable us to answer this question.

The only other place in the Rigveda where the name *Dvita* occurs is *ṛik* V, 18-2.

द्विताय शक्तवाहसे स्वस्य दक्षस्य मंहना ।

इन्दुं स धत्त आनुषक्स्तोता चित्ते अमर्त्यं ॥ ५ । १८ । २

Remarks:—There are two difficulties in connection with this *ṛik*. One as regards the construction of the sentence and another as to the meaning of the word शक्तवाहसे । The word शक्त occurs only here. Its negation अशक्त occurs several times in the sense of not hurt, destroyed or killed. शक्त may therefore be taken in the sense of injured, destroyed, killed. शक्तवाहस् therefore may be explained as the carrier of the injured, destroyed or dead. In this sense *Dvita* and *Yama* become identical.

The *ṛik* may be rendered thus:—

To *Dvita* who carries the dead, by the greatness of his own

power he (=*Agni*) offers *Soma*. O immortal one (=*Agni*). he (=*Dvita*) is ever your praiser—V, 18-2.

40. यथा कलां यथा शफं यथा ऋणं सं नयामसि ।

एवा दुःष्वप्नं सर्वमाप्ये सं नयामस्यनेहसो...८ । ४७ । १७

As we collect every part of a debt—even its eighth and sixteenth part—so every portion of the evil dream we will carry away to *Aptya Trita*—VIII. 47. 17.

There is only one more *ṛik* in which the word *Trita* occurs, namely VI, 44-33.

अयमक्षणोदुषसः सुपत्नीरयं सूर्ये अदधाज्ज्योतिरन्तः ।

अयं चिधातु दिवि रोचनेषु चितेषु विन्ददमृतं निगूढं ॥ ६। ४४। २३

He (=*Soma*) made the *Uṣās* have a beautiful husband and placed light in the sun.

He found the three-fold nectar hidden in heaven, in the third luminous region—VI, 44-23.

In this *ṛik Trita* is not a proper name. The *ṛik*, however, supplies us with an important piece of information, namely, that the word *Trita* means "the third." It is therefore likely that the god *Trita* was the third of a series of gods. As seen before we have a god named *Dvita* in the Rigveda. A god *Ekata* is to be found in the *Brāhmaṇas* but not in the Rigveda.

I have now explained all the *ṛiks* in which reference has been made to *Trita*. They have also been put under a number of groups into which they naturally divide themselves. These are:—

I. *Riks* that shew that *Trita* was a man.
II. *Ṛiks* that shew that he was a god.
III. Two important conquests of *Trita*.
IV. *Trita* was helped by the *Maruts*.
V. *Trita* as ruler of the mid-region was displaced by *Indra* and driven to a distant place.

I. At least 23 out of the 40 *ṛiks* on *Trita* shew that he was a man.

(*a*) One of the Vedic bards claims him as a relation. In this connection we may remember that *Trita* appointed the *Maruts*—the *Daçagvas*, a clan of the great *Angiras* family—as his priests. *Kutsa* the bard in question also belongs to the same family.

(*b*) *Trita* appears as a man in distress having fallen into a well. There are several instances in the Rigveda of men having fallen into wells. The significance of this fact will be easily under-

stood by those who have occasions to travel in the jungle lands of India. In jungles that are being cleared by Hill tribes in India, open wells are even now a terror to travellers. *Trita* falling into a well is a fact of ordinary life and has no mythological significance.

(*c*) *Trita* prepared *Soma* and offered it to the gods like his ancestor *Vivasvān*.

The Rigveda does not say that *Trita* did it in heaven.

(*d*) *Trita* adored *Agni*.

(*e*) He performed a Horse sacrifice. He was the third to do it, *Vivasvān* and *Yama* having done it before him.

(*f*) That *Trita* was a man also indirectly follows from the fact that *Varuṇa* and *Agni* have been called after his name.

Like his ancestors *Vivasvān* and *Yama*, *Trita* has been said to have found *Agni* in the aerial sea and established him in every house. The fact underlying this statement I have pointed out in my paper on ***Mātariçvā***.

II. The *riks* mentioned under this group shew that *Trita* was a god of the atmosphere who had control over lightning.

III. Two very important deeds said to have been done by *Trita* were:—

1° The conquest of the cows hidden in a cave by the *Paṇis* under *Vala*.

2° Killing *Vṛitra* or *Ahi* and releasing waters.

The question naturally arises whether these deeds were done by *Trita* on earth as man or as god in the sky. There is so little information given of these deeds here that it is not possible to answer it now. I shall take up this question in two separate papers.

IV. The *Maruts* acted as the priests of *Trita*—probably when he performed the Horse and other sacrifices. They also helped him in his conquests mentioned under II and in connection with other heroic deeds done by him.

V. Originally *Vāta* was the ruler of the mid-region.

सूर्यो नो दिवस्पातु वातो अन्तरिक्षात् ।

अग्निर्नः पार्थिवेभ्यः ॥ १० । १५८ । १

May *Surya* protect us from heaven (*i.e.*, from heavenly evils); *Vāta* from the atmosphere and *Agni* from the earth—X, 15 8-1.

In course of time *Vāta* as ruler of the mid-region was displaced by *Trita*. The time, again, came when in his turn

Trita had to go, and *Indra* the most popular and mighty god of the Rigveda held sway over this region.

Riks 13 to 17 of the 47th Hymn of the VIII Mandal indicate, there can be no doubt, a very late stage in the idea of *Trita*. Here *Trita* is not the mighty god who originally performed some of the most important valorous deeds which have been most enthusiastically sung in the Rigveda over and over again, nor is he now the great ruler of the mid-region sharpening *Agni* like a smelter and wielding the thunder. He has been turned out and driven to a distant place where the *Ṛiṣis* pray to the gods to remove all their evils and sins.

We have no definite information in the Rigveda as to the place where *Trita* was driven to. But, I believe, a pretty accurate guess may be made about it from hints given with regard to the place of *Nirṛiti* the goddess of Death and Destruction. This place and where *Trita* was driven to must be identical as the following *ṛiks* shew.

शतं ते राजन्भिषजः सहस्रमुर्वी गभीरा सुमतिष्टे अस्तु ।
बाधस्व दूरे निर्ऋतिं पराचैः कृतं चिदेनः प्र मुमुग्ध्यस्मत् ॥ १ । २४ । ९

You have a hundred, a thousand remedies, O king (*Varuṇa*). May your graciousness (to us) be wide and deep.

Bind *Nirṛiti* far away from us. Remove from us even the sin we have committed—I, 24-9.

Remarks :—The *Ṛiṣi* wishes his sin removed to *Nirṛiti* as afterwards the gods were asked to remove all evils and sins to *Trita*.

सोमारुद्रा वि वृहतं विषूचीममीवा या नो गयमाविवेश ।
आरे बाधेथां निर्ऋतिं पराचैरस्मे भद्रा सौश्रवसानि सन्तु ॥ ६ । ७४ । २

Remove O *Soma* and *Rudra* the disease *Viṣūchi* that has entered into our house.

Bind *Nirṛiti* far away from us. May there be for us much excellent food.

ये पाकशंसं विहरन्त एवैर्ये वा भद्रं दूषयन्ति स्वधाभिः ।
अहये वा तान्प्र ददातु सोम आ वा दधातु निर्ऋतेरुपस्थे ॥ ७ । १०४ । ९

Those who by their movements steal the hymns composed by men of experience and those who owing to their evil nature speak evil of righteous men;

May *Soma* make them over to *Ahi* or place them in the lap of *Nirṛiti*.—VII, 104-9.

This is *Ahi* below the earth.

ग्रावा वदन्नप रक्षांसि सेधतु दुःष्वप्नं निर्ऋतिं विश्वमत्रिणं ।
आदित्यं शर्म मरुतामशीमहि तद्देवानामवो अद्या वृणीमहे ।

१० । ३६ । ४

May the pressing stones singing (the praises of the gods) turn far away the *Rakṣasas*, evil dreams, *Nirṛiti* and all our voracious enemies.

We will obtain the shelter that the *Adityas* and the *Maruts* give. That protection of the gods we beg to-day—X, 36-4.

सुदेवो अद्य प्रपतेदनावृत्परावतं परमां गन्तवा उ ।
अधा शयीत निर्ऋतेरुपस्थेऽधैनं वृका रभसासो अद्युः ॥ १० । ९५ । १४

May your beloved husband fall down to-day or may he start for the farthest place never to return.

Then may he sleep in the lap of *Nirṛiti* or may the howling wolf devour him—X, 95-14.

This place of *Nirṛiti* as conceived by the *Ṛisis* was somewhere below the horizon—on the other side of the earth—the dark place where, according to the later views of the *Ṛisis*, the sun dwells during the night.

प्र साकमुक्षे अर्चता गणाय यो दैव्यस्य धाम्नस्तुविष्मान् ।
उत क्षोदन्ति रोदसी महित्वा नक्षन्ते नाकं निर्ऋतेरवंशात् ॥

७ । ५८ । १

You, in unison, sing the praise of the rain-pouring *Ganas* (=the *Maruts*) who are the most mighty of the denizens of the heavenly places ;

And who by their greatness make the *Rodasi* tremble. Who pervade (all space) from the baseless place of *Nirṛiti* to the highest heaven.—VII, 58-1.

Remarks :—Here the place of *Nirṛiti* appears to be the lowest in opposition to the नाक the highest heaven. It will be seen that it cannot be anywhere on earth, in the mid-region or heaven. It is therefore below the earth, *i.e.*, on the other side of it—the *pātāla* of the *Purāṇas*.

It was stated above that the place of *Nirṛiti*, and the place where *Trita* was driven to, are the same because they are both far away and to both of them the *Ṛisis* wished their evils and sins transferred. That they are identical also follows from the fact that the place of *Trita* and *Dvita* are identical and *Dvita* is no other than *Yama* who, towards the end of the Rigvedic period, became the god of Death in place of *Nirṛiti*.

यदुलूको वदति मोघमेतद्यत्कपोतः पदमग्नौ कृणोति ।
यस्य दूतः प्रहित एष एतत्तस्मै यमाय नमो अस्तु मृत्यवे ॥

१० । १६५ । ४

May what the owl says not happen—may the marks the pigeon makes near the hearth, not take place.

This salutation is to him by whom he has been sent as messenger,—to *Yama*—to Death.

In the Atharva Veda, *Yama* is the अन्तकः—the Ender.

We will now see if the different ideas expressed by these five groups of *ṛiks* can be brought under one general idea. For this purpose we may not take any notice of groups III and IV. For *Trita* did the deeds mentioned in the *ṛiks* under group III, either as a man or as a god, and the same thing must be the case as regards the help the *Maruts* rendered to him. Then there remain three groups of *ṛiks* representing

A° *Trita* as a man.

B° *Trita* as a god of the mid-region.

C° The god *Trita* being driven from the mid-region to a distant place.

For our present purpose the C° group of *ṛiks* also are not of much importance. For in the history of the Vedic gods the fall of a god from a higher to a lower position is not an uncommon thing. We have therefore only two groups of *ṛiks* to consider, namely, I and II. The one saying that *Trita* was a god and the other that he was a man.

Now the question is, can we bring the *ṛiks* comprised in both these groups under the same idea ? One way to do this would be as pointed out at the outset of this paper, to explain away the duality in the character of *Trita*. But this would be doing too much violence to the *ṛiks* ; for they speak of the duality in the character of *Trita* in quite unmistakable terms. Then there remain only two other ways of doing this.

First, that *Trita* was originally a man who after death was deified.

Second, that he was originally a god—a physical object personified—who was gradually brought down to the level of a man.

The one is the method of deification—the other that of anthromorphization. I do not think that this second method will prove sufficient to meet the circumstances of the present case. That a god may be believed to act and think like a man, is a common thing. That he may come down to earth and fight a battle for his worshipper and do other similar acts for him, the readers of the Rigveda can easily understand. But the idea of *Avatār*, as long ago Wilson remarked, is foreign to the beliefs of the Vedic *Ṛiṣis*. That a god himself would be in

distress, prepare Soma and offer it as libation to other gods, worship Agni, and perform a Horse sacrifice—are not things that can be explained by the second method.

The first method on the other hand gives a natural explanation of the duality in the character of such gods as *Vivasvān*, *Yama*, *Trita*, &c. There is repeated mention made in the Rigveda of men becoming gods by *sukṛiti* or good work. In one form or other a belief in deification runs through the whole history of the Hindu Religion from the Vedic times to our own. Among the different schools that were formed about 700-600 B.C. to explain the Rigveda, there was one known as the Historical School who believed that many historical facts lay hidden within the peculiar and often wilfully mysterious language of the Samhita. This school no doubt invented many a fanciful story and committed many a mistake, but their method ought not to have been rejected in the way it has been done.

It is now time that we should see what Avesta speaks of *Trita*. But here at the very outset we meet with a difficulty. We have first to settle what character in the Avesta corresponds to the Rigvedic character of *Trita*. Three characters are mentioned in the Avesta, between all of them and *Trita* there are some similarities. These are *Āthwya* or *Āthvya*, his son *Thraétaona*, and *Thrita*. The last name and *Trita* are identical; for Zend *th* = Sanskrit *t*. Again according to the Avesta, *Thrita* was the third man who prepared the Haoma (=S. *Soma*) for this lower world and performed the Haoma ceremony. The Rigveda represents *Trita* as the third king who gathered *Agni* from the celestial ocean and performed the Horse-sacrifice. The next character is *Thraétaona*. The name means "son of *Thrita*," and in the Avesta his father is called *Āthvya*. This *Thrita* father of *Thraétaona* is therefore Āthvya *Thrita* = the Āptya Trita of the Rigveda. For Zn *Āthvya* is S. Āptya—Zn *th* =S. *t* and Zn *p*= S. *v*, and there has been a displacement (Metathesis) of *v*, and *th*. Similar displacements we have in other Aryan languages also, *e.g.* S. कुर्यात्, मशक = Pali कहेरा, मकस respectively. Of the three characters mentioned before two, namely *Thrita* and *Āthvya*, are probably identical, *i.e.* there is only one Thrita who has been mentioned as

(1) simply *Thrita*,
(2) simply Athvya,

and as (3) Athvya Thrita (indirectly mentioned as such through his son Thraêtaona which means son of Thrita). According to the Rigveda *Āptya Trita* was the third man to 1° gather fire from the aerial waters and 2° to perform a Horse sacrifice, *Vivasvān* and *Yama* having done so before him. In the Avesta he was the second to perform the Haoma ceremony, *Vivasvan* having been the first to do this.

Both the scriptures agree that *Āptya Trita* performed an important religious ceremony. Now comes a difference between them. The Rigveda says—

पितुं नु स्तोषं महो धर्माणं तविषीं ।
यस्य त्रितो व्योजसा वृत्रं विपर्वमर्दयत् ॥ १ । १८७ । १
स हर्द्दासं तुवीरवं पतिर्दन्यस्य चिन्नौर्षाणं दमन्यत् ।
अस्य त्रितो न्वोजसा वृधानो विषा वराहमयोअग्रयाहन ॥
१० । ९९ । ६

I shall soon glorify the mighty drink (*Soma*) the holder of power.

By whose energy *Trita* rent *Vṛitra* joint from joint—I, 187-1.

He the lord of the house (=Agni) verily slew the loud-roaring, six-eyed, three-headed *Dāsa*.

By his (Agni's) energy, indeed, Trita killed the boar (=*Vṛitra*) with his iron-tipped fingers—X, 99-6.

These two *riks* shew that *Trita* killed *Vṛitra*. The second *rik* also gives certain characteristics of *Vṛitra*.

In *Yasna* IX there is an interesting conversation between *Haoma* (*Soma*) and *Zarathustra*. On being asked by the latter what man first prepared him for this world, how was he blessed, and what was his gain, *Haoma* replied that *Vivanghant* was the first of mortals who prepared him. He was blessed with a son named *Yima* the brilliant.

To a similar question *Haoma's* answer was that *Athwya* was the second man who prepared him, and to him was born the heroic *Thraêtaona* who smote the dragon *Dahāka*, three-jawed, triple-headed, six-eyed with thousand powers, and of mighty strength, a lie-demon of the *Daevas* . . . .

Haoma said in reply to a third question by *Zarathustra* that *Thrita* was the third man who prepared him for this world. He smote a horny dragon who swallowed men and cattle and who was full of poison. [S.B.E. Dr. Mills, Vol. XXXI.]

From the description of the dragon *Dahāka* as well as from his name—here called *Dahāka* and elsewhere *Azi Dahāka* (S. Dās Ahi)—there can be no doubt that if the most important act performed by him be taken into consideration then the *Aptya Trita* of the Rigveda corresponds to *Thraêtaona* of the Avesta. But if the names only be considered then the *Āptya Trita* of the Rigveda is the *Āthwya Thrita* of the Avesta. An act which one scripture ascribes to the father the other scripture ascribes to the son. A similar discrepancy I pointed out in case of *Ganderwa* (Vedic *Gandharva Vivasvān*) and his son *Yima* (Vedic *Yama*). I may notice here in passing that a चेतन is mentioned

in an obscure ṛik in the Rigveda (I, 158. 5). He is a villain and a *Dās*. So the matter stands thus :—

(1) In the Rigveda *Gandharva* is one of the most respected characters. According to the Avesta *Ganderwa* is a demon.

(2) Yama's character towards the end of his reign has been magnified in the Rigveda and cursed in the Avesta.

(3) *Trita's* character towards the end of his reign has been lowered in the Avesta but the Rigvedic *Risis* have deified him.

(4) In the Rigveda *Traitana* is a villain. The Avesta ascribes to him the most valorous deed done by any Aryan king.

Towards the end of the Rigvedic period, however, a new generation of *Ṛiṣis* seem to prefer the view of matter held in the Avesta.

We have seen that in the Rigveda, along with *Trita*, a *Dvita* is mentioned, and the *Ṛisis* wished their sins and evils transferred to both of them. In the later Vedas and *Brāhmanas* along with *Trita* and *Dvita* one *Ekata* is also mentioned. The general opinion of the Vedic scholars is that originally there was only one real character namely *Trita* or third. The other two are fictitious characters invented after his name. This does not seem to be a correct view. For it presupposes the existence of a character called *Trita* or third. But how could such a name be given to a god or man or even to a thing from whichever basis *Trita* might have been originally conceived unless there were also a first and a second, *i.e.*, an *Ekata* and a *Dvita?* That the very original idea involved the existence of three beings or objects—for some reason or other called first, second and third—*Ekata*, *Dvita* and *Trita*—there cannot be any doubt. According to Professor Macdonell *Trita* was originally lightning, a form of Agni, the sun and the terrestrial fire being the other two forms. I have already given my reasons why this view cannot be accepted. This view appears to be of a doubtful character even if we consider merely the name *Trita* the third. That *Agni* exists in three different forms was a fundamental belief with the *Ṛisis*. But excepting in one place, the lightning has always been considered as the middle or the second form. This exception is a late *ṛik* in the X *Mandal*, namely, X, 45-1.

दिवस्परि प्रथमं जज्ञे अग्निरस्मद्द्वितीयं परि जातवेदाः ।
तृतीयमप्सु नृमणा अजस्रमिन्धान एनं जरते स्वाधीः ॥ १० । ४५ । १

Agni was first born out of heaven ; the All-knower, in the second place, came from us.

Thirdly, the Friend of man was born in waters. The pious always kindles and praises him—X, 45-1.

This statement that it was in the third place that *Agni* was born in waters, that is, that lightning was the third form

of *Agni*, is connected with a special belief the *Ṛiṣis* entertained towards the end of the Rigvedic period. To this we will come later on.

The real facts in connection with *Ekata*, *Dvita* and *Trita*—the *Āptya* deities as they are called—will clearly appear if we will begin with a story told in the *Çata. Brā.*

चतुर्धा विहितो ह वा अग्रेऽग्निरास। स यमग्रेऽग्निं होत्राय प्रावृणत स प्राधन्वद्यं द्वितीयं प्रावृणत स प्रैवाधन्वद्यं तृतीयं प्रावृणत स प्रैवाधन्वदथ योऽयमेतर्ह्यग्निः स भीषा निलिल्ये सोऽपः प्रविवेश्न तं देवा अनुविद्य सहसैवाङ्ग आनिन्युः सोऽपोभितिष्ठेवावधुताःस्थ या अप्रपदनं स्थ याभ्यो वो मामक्रामं नयन्तीति तत आप्त्याः सम्बभूवुस्त्रितो द्वित एकतः ॥ १ । २ । ३ । १

Fourfold, namely, was *Agni* at first. Now that *Agni* whom they at first chose for the office of *Hotṛi* priest passed away. He also whom they chose the second time passed away. He also whom they chose the third time passed away. Thereupon the one who still constitutes the fire in our own time, concealed himself from fear. He entered into the waters. Him the gods discovered and brought forcibly away from the waters. He spat upon the waters, saying, 'Bespitten are ye who are an unsafe place of refuge, from whom they take me away against my will.' Thence sprung the *Āptya* deities, *Trita*, *Dvita* and *Ekata*. [Eggeling, S.B.E., Vol. XII.]

This story is based on a curious Hymn (X, 51) of the X *mandal* but differs from the latter in certain important respects.

महत्तदुल्बं स्थविरं तदासीद्येनाविष्टितः प्रविवेशिथापः।
विश्वा अपश्यद्बहुधा ते अग्ने जातवेदस्तन्वो देव एकः ॥ १
को मा ददर्श कतमः स देवो यो मे तन्वो बहुधा पर्यपश्यत्।
क्वाह मिचावरुणा क्षियन्त्यग्नेर्विश्वाः समिधो देवयानीः ॥ २
ऐच्छाम त्वा बहुधा जातवेदः प्रविष्टमग्ने अप्स्वोषधीषु।
तं त्वा यमो अचिकेच्चित्रभानो दशान्तरुष्यादतिरोचमानं ॥ ३
होचादहं वरुण बिभ्यदायन्नेदेव मा युनजन्नच देवाः।
तस्य मे तन्वो बहुधा निविष्टा एतमर्थं न चिकेताहमग्निः ॥ ४
एहि मनुर्देवयुर्यज्ञकामोऽरङ्कृत्या तमसि क्षेष्यग्ने।
सुगान्पथः कृणुहि देवयानान्वह हव्यानि सुमनस्यमानः ॥ ५

अग्नेः पूर्वे भ्रातरो अर्थमेतं रथीवाध्वानमन्वावरीवुः ।
तस्माद्वियो वरुण दूरमायं गौरो न क्षेप्नोरविजे व्यायाः ॥ ६
कुर्मस्त आयुरजरं यदग्ने यथा युक्तो जातवेदो न रिष्याः ।
अथा वहासि सुमनस्यमानो भागं देवेभ्यो हविषः सुजात ॥ ७
प्रयाजान्मे अनुयाजांश्च केवलानूर्जस्वन्तं हविषो दत्त भागं ।
घृतं चापां पुरुषं चौषधीनामग्नेश्च दीर्घमायुरस्तु देवाः ॥ ८
तव प्रयाजा अनुयाजाश्च केवल ऊर्जस्वन्तो हविषः सन्तु भागाः ।
तवाग्ने यज्ञोऽयमस्तु सर्वस्तुभ्यं नमन्तां प्रदिशश्चतस्रः ॥ ९

Varuṇa :—Then there was that great and thick covering by which you had covered yourself and entered into the waters, O *Agni*. Then, one god, O all-knower, saw all your different forms—X, 51-1.

Agni :—Who saw me? Who among the gods saw my different forms? Tell me, O *Mitra* and *Varuṇa*, where do all those shining bodies of *Agni* reside by which he goes to the gods? 2.

Varuṇa :—We desire to have you, O all-knowing *Agni*. O god, full of variegated lights, *Yama* saw you entering into the waters and the herbs with your different forms—you who live in ten secret places shining beyond others. 3.

Agni :—I came here, O *Varuṇa*, from fear of the office of *Hotā*, that the gods might not appoint me thus.

Thus my forms have entered into waters in various ways and I *Agni* refuse to do this work. 4.

Varuṇa :—Come, pious man is ready to perform sacrifices. You, O *Agni*, are dwelling in darkness.

Make the paths of the gods easy to go. Carry the libations graciously.

Agni :—This work the elder brother of *Agni* selected, as the charioteer does the path. Therefore, O *Varuṇa*, from fear, I came to this far-away place as the stag flies from the bow-string of the archer. 6.

The gods :—We make your life unwasting so that in doing this work, O all-knower, you will not get hurt.

Then, O noble-born, being gracious carry to the gods their share of the oblations. 7.

Agni :—Then give me the whole of the first libations and the last, and the portion of the offerings that give strength.

The cream of waters and the essence of herbs. And may, O gods, *Agni's* life be a long one. 8.

The gods :—Thine be the entire first libations and the last, and the portion of the offerings that give strength.

Let all this sacrifice be thine and let the four quarters bow down before you. 9.

The statement that it was in the third place that *Agni* in the form of lightning was born from waters (X, 45-1) is based on this *ṛik*. There was at first the sun—the first form of *Agni*—born of heaven. Then was born the *Agni* from man—by the latter rubbing one piece of wood against another. It was by this *Agni* that men used to perform sacrifices to the gods. Then, as the present hymn says, *Agni* got tired of carrying oblations and was afraid that as his three elder brothers had died before while doing this work, he might meet with a similar fate. Out of fear he entered into the waters. But the gods followed him and found him there. This *Agni* found in or born of the waters is lightning. It is referred to in *ṛik* X, 45-1 as the third form of *Agni*. In other places. the *Ṛiṣis* in speaking of the three forms of *Agni* either began with the sun and ended with the terrestrial fire or began with the latter and ended with the sun. In either case the lightning was counted as the second form of *Agni* or his middle brother, as we have in the following *ṛik* :—

अस्य वामस्य पलितस्य होतुस्तस्य भ्राता मध्यमो अस्त्यश्नः ।
तृतीयो भ्राता घृतपृष्ठो अस्यात्रापश्यं विश्पतिं सप्तपुत्रं ॥ १।१६४।१

Of this venerable grey-haired *Hotā* (*i.e.*, of the sun) the middle brother is the swift-moving one (*i.e.*, the lightning). His third brother is the butter-backed whom we see here as the lord of the house and the father of the seven sons (the terrestrial *Agni* with seven priests).

Up to this point the story told in the *Çat. Brā.* agrees with our hymn. Now the difference begins. That the gods brought *Agni* out of waters forcibly, that *Agni* spat on waters, and in consequence of this the *Āptya* deities—*Ekata*, *Dvita* and *Trita*—were born, are not to be found in the Hymn. On the other hand, the hymn says that it was by entreaty and important concessions that *Varuṇa* and the other gods succeeded in persuading *Agni* to come out of the waters Then there is no mention made of *Agni* being annoyed with the waters and spitting on them. The only person with whom *Agni* appears to have been annoyed is *Yama*. This *Yama*, I pointed out before, was probably identical with the *Dvita*. This has proved to be a very important clue in conjunction with certain statements in the Avesta and the *Çat. Brā.* for finding out who the *Āptya* deities were.

The present hymn tells us that *Yama* found *Agni* in the waters. We saw before [see my paper on *Mātariçvā*, p. 41] that *Vivasvān* with the help of his messenger *Mātariçvā* was the first to gather *Agni* from the waters.

त्वमग्ने प्रथमो मातरिश्वन आविर्भव सुक्रतूया विवस्वते ।
अरेजेतां रोदसी होत्रवूर्ये ऽसघ्नोर्भारमयजो महो वसो ॥ १। ३१। २

You, *Agni*, first appeared to *Mātariçvā* for his skill—to *Vivasvān*. On your election as *Hotā*, the earth and the heaven trembled. You, however, sustained their weight, O shining one, —you sacrificed to the gods—I, 31-1.

स जायमानः परमे व्योमन्याविरग्निरभवन्मातरिश्वने ।
अस्य क्रत्वा समिधानस्य मज्मना प्र द्यावा शोचिः पृथिवी अरोचयत् ॥
१ । १४३ । २

As soon as born in the highest heaven *Agni* appeared to *Mātariçvā*. By his (*Mātariçvā's*) skill and the power of the act of kindling, the brilliant one illuminated the heaven and the earth—I, 143-2.

Then in the third place it was *Trita* who found *Agni* in the waters :

इमं त्रितो भूर्यविन्ददिच्छन्वैभ्वसो मूर्धन्यघ्न्यायाः ।
स शेवधो जात आ हर्म्येषु नाभिर्युवा भवति रोचनस्य ॥ १०। ४६। ३

Wishing to discover the mighty *Agni*, *Trita*, son (=a descendant) of *Vibhuvasu* (=*Viçvāvasu Gandharva*=*Vivasvān*) found him on the head of the *not-to-be-killed* (=cow=cloud).

Agni the increaser of happiness was born in every house, and the young god became the centre of the sacrifice—X, 46-3.

If *Agni*, when surprised in the waters where he had taken refuge out of fear, was annoyed with *Yama*, we may take it that he was also annoyed with *Vivasvān* and *Trita*. For they too found him there. And we may also take it that they were believed by the *Risis* to have been cursed and degraded. That towards the end of the Rigvedic period the *Risis* took rather a poor opinion of these gods there can be no doubt. Riks VIII, 47-13 to 17 shew that about this time the *Risis* wished all their evils and sins transferred to the far-away abode of *Trita*. *Rik* X, 165-4 says that *Yama* is the god of Death—the अन्तकः Ender of the Atharva Veda. He also sends his messenger to see who were to die and to take them away. *Rik* V, 18-2 says that *Dvita* is मृत्युवाहः—Carrier of the dead. He and *Yama* are therefore the same. The *Risis* wished their evils and sins transferred to both *Dvita* and *Trita* (VIII, 47-16). The Rigveda nowhere says that *Vivasvān* was the *Ekata*. But he too was degraded :

मा नो हेतिर्विवस्वत आदित्याः क्रचिमा शरुः ।
पुरा नु जरसो वधीत् ॥ ८ । ६७ । २०

" Let not *Vivasvan's* weapon nor his shaft, *Ādityas*, wrought with skill,
Destroy us ere old age be nigh "—VII, 67-20 [Griffith].

Here *Vivasvān* has been represented as if he were another *Yama*—god of Death.

To lower the position of *Trita* and *Yama* was easy, but not so to lower the position of *Vivasvān*. *Trita* was the god of the mid-region. Already a new god—*Indra*—has been put there, and the *Ṛiṣis* have only to say that *Trita* has gone to a distant place and the thing was done. *Yama* was the king of the *Pitṛis* who died and accompanied him to the disc of the sun, and he himself had to die before going there. He was therefore connected with death. Already there was a goddess of death—*Nirṛiti*. The *Ṛiṣis* made *Yama* the god of death in her place and the thing was done. But *Vivasvān* had been identified with the sun,—how to lower his position. A new idea with which the *Ṛiṣis* were struck of late came to their help. There was a region beyond the horizon where the sun sets. This was the place of *Nirṛiti*. This was the place where *Trita* was transferred, and *Yama* or *Dvita* also. *Vivasvān*—the sun—also goes there but he comes back. His rising and setting were regarded as his repeated birth and death.

य ईं चकार न सो अस्य वेद य ईं ददर्श हिरुगिन्नु तस्मात् ।
स मातुर्योना परिवीतो अन्तर्बहुप्रजा निर्ऋतिमा विवेश॥१।१६४।३२

Who made him he does not know him—who saw him from him he is hidden.

Enveloped in the mother's (=earth's) womb he is born repeatedly and enters into *Nirṛiti*—I, 164-32.

This *ṛik* is difficult but not unintelligible. I explained the *ṛik* preceding it (I, 164-31 = X, 177-3) in my paper on *Vivasvān*, p. 37, and shewed that the गोपाः in that ṛik is the sun—the protector of the cows, *i.e.* the rays. The ईं in the present *ṛik* is the same sun identified with *Vivasvān*.

The first half line says that his father स्वधाः does not comprehend him. The meaning of the second half line is that all men see him but very few know who he is. The second line has already been explained.

This, I think, was the origin of the idea of the *Āptya* deities of the *Ç.B.*, but the author of the paragraph quoted from it misunderstood the meaning of the word *Āptya* and invented a fanciful story. The word means not born of waters but appertaining to waters. The *Āptya* deities were so called because they discovered *Agni* in his hiding place in the celestial sea.

The story of the origin of the *Āptya* deities as told in the *Maitr. Sam.* and the T B. is based on the A.V. VI, 113 and not on the Hymn of the Rigveda quoted above. I give their version

from a paper by Professor Bloomfield entitled "*Trita* the Scapegoat of the gods":

The gods did not find a person upon whom they might be able to wipe off from themselves the bloody part of the sacrifice. Then *Agni* spake: 'I will create for you him upon whom ye shall wipe off from yourselves the bloody part of the sacrifice.' He threw a coal upon the waters; from that *Ekata* was born. (He threw) a second one; from that *Dvita* (was born). (He threw) a third one; from that *Trita* (was born).

This version as well as that of A.V. VI, 113 is evidently based on ṛiks VII, 13 to 17. But between them there is this fundamental difference. The *ṛiks* speak of the evils and sins of the human beings only. The idea of the gods meeting with evils and committing sins and feeling the necessity of getting rid of them, by transferring them to somebody else, is foreign to the belief of the Rigvedic *Ṛiṣis*. How the change in the belief was brought about is, however, easily seen. It was the result of the deification of the men of the preceding age. But we will not proceed further with this question now. We are now concerned with a different subject, namely—

1° What is really the object of Hymn X, 51? And

2° Why did the *Ṛiṣis* lower the position of *Vivasvān*, *Yama* and *Trita*? I shall also try to find out 3°—The real meaning of the word *Āptya*.

1° In connection with the god *Agni*, the *Ṛiṣis* obtained a good deal of scientific knowledge. Considering the age when this was done their discovery of the triple forms of *Agni*—that he is the sun, the lightning and the household fire—was a marvellous one. They also believed that *Agni* is concealed in the celestial waters and the herbs **प्रविष्टमग्ने अप्स्वोषधीषु**। Probably it was in connection with this latter fact that the question was put why did Agni hide himself within the waters and the herbs? Hymn X, 51 is an attempt to answer this question. Varuṇa's answer **त्वा यमो अचिकेत्** to Agni's question:

को मा ददर्श्य कतमः स देवो यो मे तन्वो बहुधा पर्य्यपश्यत्।

is not historically true. It was *Vivasvān* and not his son *Yama* who first gathered *Agni* from heaven—from afar. The act was ascribed to *Yama* probably for two reasons. (*a*) King *Yama* was considered the most important personage of the royal family of *Vivasvān*. In the words of the Atharva Veda—XVIII, 2-32.

ततः (यमात्) परं नातिपश्यामि किंचन।

(*b*) Having identified *Vivasvān* with the sun the highest form of *Agni*, the *Ṛiṣis* no doubt found it odd to say that it was *Vivasvān* who gathered *Agni* from lightning.

2° This is the most important question, and it is also the most difficult to answer. Let me first recall the points that have been proved by the evidence of the Rigveda itself. (*a*) First that *Yama* was a man. This follows at once from the fact that he died. **प्रियां यमस्तन्वं प्रारिरेचीत्** (१० । १३ । ४) । Then *Vivasvān* was his father.

——————यम——————— ।
विवस्वन्तं हुवे यः पिता ते ॥ १० । १४ । ५

And Trita was one of their descendants. He has been called **वैभूवस** the son or descendant of **विभूवसुः** who can be no other than **विश्वावसुः गन्धर्वः** *i.e.* **विवस्वान्** । These three persons therefore belonged to the same family.

(*b*) After their death they were all deified. *Vivasvān* was identified with the sun. *Yama* with the *Pitṛis* founded a kingdom—the Paradise of the Vedic *Ṛisis*—in the disc of the sun, and *Trita* became the king of the mid-region.

(*c*) The position of these deities was lowered. *Indra* displaced *Trita* who had to go to the nether world—the place of *Niṛriti*. *Yama* became the god of Death in place of *Niṛriti*. *Vivasvān* the sun goes to the place of *Niṛriti* daily and dies. But he is born as often as he dies **प्रजाः** । His degradation has, in the Rigveda, taken another form. *Indra* is said to have defeated him.

मुषाय सूर्यं कवे चक्रमीशान ओजसा । १ । १७५ । ४

Being the lord of all, by your power, O sage (=Indra) you forcibly took away one of the wheels of the sun—I, 175-4. (See also IV, 30-4; X, 43-5.)

The degradation of these gods—especially of *Trita*—in one form or other appears in all the later Vedas and the Brāhmaṇas. What the historical fact underlying this degradation was, will appear clearly if the change in the character of *Viṣṇu* towards the end of his life, as given in the Ç. B., be compared with the change in the character of *Yima* as given in the Zamyad Yast.

According to the latter, "The awful kingly glory clave unto the bright Yimo, the good shepherd, for a long time while he ruled over the seven Karshvares of the earth. . . . .

In his reign food and drink never failed for feeding creatures. . . . .

In his reign there was neither cold wind nor hot wind, neither old age nor death. . . . . .

But when he began to find delight in words of falsehood and untruth, the glory was seen to flee away from him in the shape of a bird. Then Yima trembled and was in sorrow before

his foes ; . . . . and Azi Dahāk and Spityura sawed Yima in twain—(S.B.E., Vol. XXIII. Darmesteter).

The Ç. B. says that *Viṣṇu*, by the performance of sacrifice, became the most excellent of gods. But after a time he lost self-control and became arrogant. The gods became envious of him. They wanted to kill him but did not dare to do so. One day *Viṣṇu* was asleep, resting his head on the end of his bow when the gods had the bowstring gnawed off by the ants—the ends of the bow sprang asunder and *Viṣṇu's* head was cut off.

In my paper on *Viṣṇu* I have shewn that *Yama* and *Viṣṇu* are the two sides of the same character—one describing the career after death, and the other the earthly career. It will be seen that the statement of the Zamyad Yast and that of the Ç. B. are simply two versions of the same incident.

The same fall in the character of *Yama* towards the end of his glorious reign we learn also from the legendary history of *Persia*. According to it the character of *Trita* (= Feridoon) also was of a mixed nature.

Among the forefathers of the Parsis, *Vivasvān*, *Yama* and *Trita* were not deified. They remained as men, and the memory of their glorious reigns as well as the defects in their character, was correctly handed down generation after generation. Not so among the Vedic *Ṛiṣis* and their forefathers. By them the three great kings were deified. But unfortunately even in India they could not enjoy their godly dignity undisturbed. Towards the end of the Rigvedic period a class of *Ṛiṣis* arose who believed in one God only and questioned the right of these deified kings to occupy the Vedic pantheon. It was by these *Ṛiṣis* that the position of the *Aptya* deities was lowered.

3° According to the *Brāhmaṇas* the word *Āptya* means born of waters. Hymn X, 51 seems to imply that the word means he who found *Agni* in waters. The first of these two meanings should be rejected as it is inconsistent with the statements of the Rigveda. The second meaning must also be given up as it does not positively follow from Hymn X, 51, while it is contradicted by other hymns. Both the Rigveda and the Avesta shew that the epithet *Āptya* is especially connected with *Trita*. But if the word means the discoverer of *Agni* in the celestial waters, it is *Vivasvān* who has the best claim to the epithet *Āptya*. The word must therefore mean something else. There can also be little doubt that *Trita* must have been given this epithet for some important act done by him with regard to waters. Looking into the *ṛiks* under group headed : "Two important acts done by *Trita*," we find that one of these was his killing *Vṛitra* or *Dās Ahi* and releasing waters. In both the Rigveda and the Avesta this act has been repeatedly and most enthusiastically glorified. I have no doubt that it was for this most daring and beneficent act done by him that *Trita* obtained the title of *Āptya*.

Before bringing this paper to an end I would say a word as regards the evidential value of the Avesta in explaining difficult passages in the Rigveda. The general opinion of the Vedic scholars is that the religion of the Avesta reveals a more anthropomorphosed condition than that of the Rigveda. I think this is not true. The difference between the religions of the Rigveda and the Avesta is due not to more of anthropomorphisation in the Avesta but to less of deification in it. That in which the Avesta exceeds the Rigveda is the creation of abstract gods. Though the Iranian *Ṛiṣis* renounced polytheism and believed in one supreme god—the Ahurá Mazda (*Mahat Asur*—Great Spirit)—they did not altogether give up the old gods. They retained their belief—though in an altered form—in Mitra, Atar, Soma, Apaṁ Napat and many other old gods. They also created the abstract gods—Goodness, Righteousness, Asha and others in the same way as the Vedic Ṛiṣis created Çraddhā, Manyu, etc. But they differed from the Vedic Ṛiṣis in their estimation of certain characters like *Vivasvān*, *Yama*, *Trita*, etc. The Vedic Ṛiṣis represented them in the double character of men and gods, and in some cases they carried the deification so far as to all but obliterate their human side. The Avesta Ṛiṣis on the other hand did not deify these characters though now and then they used very much exaggerated language in describing them. I think it should be conceded that, on the whole, many historical facts have been better preserved in the Avesta than in the Veda.

APRIL, 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 7th April, 1909, at 9-15 P.M.

SIR THOMAS HOLLAND, K.C.I.E., D.Sc., F.R.S., F.G.S., President, in the chair.

The following members were present :—

Maulavi Abdul Wali, Dr. N. Annandale, Babu Rakhal Das Banerji, Babu Nagendra Nath Basu, Mr. W. B. Brown, Babu Nilmani Chakravarti, Mr. J. A. Cunningham, Mr. L. L. Fermor, Mr. H. G. Graves, Lt.-Col. C. R. M. Green, I.M.S., Mr. B. A. Gupte, Lt.-Col. G. F. A. Harris, I.M.S., Dr. W. C. Hossack, Lt.-Col. F. P. Maynard, I.M.S., Hon. Mr. Justice Asutosh Mukhopadhyaya, Dr. Girindra Nath Mukerjee, Dr. Indu Madhab Mullick, Major L. Rogers, I.M.S., Pandit Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha, Mahamahopadhyaya Haraprasad Shastri, Major C. R. Stevens, I.M.S., Mr. G. H. Tipper, Dr. G. Thibaut, C.I.E., Dr. Satis Chandra Vidyabhusana, Mr. E. Vredenburg, Mr. W. H. A. Wood, Rev. A. W. Young.

Visitors :—Mr. M. Auliff and Mr. F. M. Howlett.

The minutes of the last meeting were read and confirmed.

Fifty-eight presentations were announced.

The General Secretary reported :—

1. That Col. J. C. Harwood, R.A.M.C., Mr. C. S. Delmerick, Mr. A. Shrager, and Pandit Umapati Dutta Sharma had expressed a wish to withdraw from the Society.

2. That H. H. the Maharaja Radha Kishore Dev Barman of Tipperah, and Babu Ananda Prosad Bose were dead.

The General Secretary read the names of the following gentlemen who had been appointed to serve on the various Committees for the present year :—

Finance Committee.

Dr. N. Annandale.
Hon. Mr. Justice Asutosh Mukhopadhyaya.
Mr. I. H. Burkill.
Mr. H. G. Graves.
Mahamahopadhyaya Haraprasad Shastri.
Lt.-Col. F. P. Maynard, I.M.S.

Library Committee.

Dr. N. Annandale.
Hon. Mr. Justice Asutosh Mukhopadhyaya.
Mr. J. N. Das-Gupta.
Mr. H. G. Graves.
Mahamahopadhyaya Haraprasad Shastri.
Mr. Harinath De.
Dr. G. P. Harrison.
Mr. H. H. Hayden.
Mr. T. H. D. LaTouche.
Lt.-Col. F. P. Maynard, I.M.S.
Major L. Rogers, I.M.S.
Dr. E. D. Ross.
Dr. G. Thibaut.

Philological Committee.

Dr. Abdullah al-Mamun Suhrawardy.
Hon. Mr. Justice Asutosh Mukhopadhyaya.
Mahamahopadhyaya Chandra Kanta Tarkalankar.
Mr. E. A. Gait.
Dr. Girindra Nath Mukhopadhyaya.
Mahamahopadhyaya Haraprasad Shastri.
Mr. Harinath De.
Babu Monmohon Chakravarti.
Babu Muralidhar Banerjee.
Babu Nagendra Nath Vasu.
Lt.-Col. D. C. Phillott, 23rd Cavalry, F.F.
Dr. E. D. Ross.
Mahamahopadhyaya Satis Chandra Vidyabhusana.
Acharya Satyavrata Samasrami.
Dr. G. Thibaut.
Mr. E. Venis.
Pandit Yogesa Chandra Sastri-Samkhyaratna-Vedatirtha.

The General Secretary submitted an obituary notice of Sir George King, K.C.I.E., F.R.S., an Honorary Member of the Society, contributed by Captain A. T. Gage, I.M.S.

George King, the only son of Robert King and Cecilia Anderson, was born at Peterhead on 12th April, 1840. He was educated at the Grammar School and at the University of Aberdeen, where he graduated with first-class Honours in Medicine in 1865. Almost immediately he entered the Indian Medical Service, and after the usual probationary period at Netley Hospital, arrived in India on the 11th of April, 1866.

Up to about the end of 1868 his official duties were entirely medical. He was posted first on general duty at the General Hospital, Calcutta, then as House Surgeon at the Medical College

Hospital, Calcutta. Thereafter he did duty with the 41st Regiment of Native Infantry at Agra, then was Civil Surgeon of Muthra for a short time, then Assistant Surgeon of the 1st Central India Horse, and then Assistant Surgeon in medical charge of the Jodhpur (Marwar) Political Agency, his last purely medical appointment. In December 1868 he was appointed to officiate as Superintendent of the Saharanpur Botanical Garden, which office he held for one year. In December 1869 he was appointed Assistant Conservator of Forests in the North West or—as they are now styled—the United Provinces of Agra and Oudh, and took charge of the Gharwal division, subsequently having charge of the Kumaon Division. He remained in the Forest Department for about a year and half, until on the 10th of July, 1871, he assumed charge of the superintendentship of the Royal Botanic Garden, Calcutta, with which his life work was thereafter to be associated. In addition to being placed in charge of the Botanical Garden, King was also appointed at the same time to be Superintendent of the Bengal Cinchona Department and Professor of Botany at the Medical College, Calcutta.

In 1871 the condition of the Botanic Garden and of the Cinchona Department was the reverse of encouraging to the new Superintendent. The devastative cyclones of 1864 and 1867 had played such havoc with the Garden that it was little better than a swampy wilderness of "ooloo" grass, while the Cinchona Department had almost succumbed in the struggle with initial difficulties.

With the confidence and liberal support of the Government of Bengal, King set himself to his double task; and both the confidence and support were admirably justified. With a delicate appreciation of landscape effect, and through years of labour, the Garden became transformed from a wilderness to a scene of beauty such as Heine imagined when he wrote :—

"Auf Flügeln des Gesanges
Herzliebchen, trag' ich dich fort.
Fort nach den Fluren des Ganges,
Dort weiss ich den schönsten Ort;
Da liegt ein röthblühender Garten
Im stillen Mondenschein,
Die Lotosblumen erwarten
Ihr trautes Schwesterlein.

Dort wollen wir nieder sinken
Unter dem Palmenbaum,
Und Lieb' und Ruhe trinken,
Und träumen seligen Traum."

The first years of King's administration of the Cinchona Department were occupied with the organisation of the plantation and the starting of a factory for the manufacture of Cinchona Febrifuge. In 1874 Cinchona Febrifuge was first

issued, and until 1887 continued to be practically the sole product manufactured. King, however, did not remain content with this success but bent his energies to discover the secret of manufacturing Quinine.

In this, despite discouragement from certain quarters, he ultimately succeeded, and in 1897 Quinine was first manufactured and over 300 lbs. issued. Since then the amount annually produced from the factory has gone on increasing, until now nearly 40,000 lbs. are manufactured every year

The work of re-establishing the Botanical Garden, both horticulturally and scientifically, to a position surpassing its state prior to the cyclone, and of organising the Cinchona Department as his foremost duty, fully occupied King's time for more than the first decade of his superintendentship. During that period of organising activity his public contributions to botanical science were necessarily of limited extent, but show the same thoroughness, clearness, and accuracy that characterise his later and more important works.

By 1887 both Departments under his care had made so much progress that King was able to devote more time to research work, and in that year appeared his magnificent "Monograph of the genus Ficus" forming the first of a series of monographs of various orders and genera that constitute the Annals of the Royal Botanic Garden, Calcutta. Thereafter appeared in the same publication a series of monographs by him on:—

The Species of Artocarpus indigenous to British India; The Indo-Malayan Species of Quercus and Castanopsis; The Magnoliaceae of British India; The Species of Myristica of British India; The Anonaceae of British India; A Century of New and Rare Indian Plants (in conjunction with P. J. Brühl); The Orchids of the Sikkim-Himalaya (in conjunction with R. Pantling); A Second Century of New and Rare Indian Plants (in conjunction with J. F. Duthie and D. Prain);—all works of the highest scientific value that have helped very largely to establish the high place that the Calcutta Garden enjoys in the botanical world.

King did not restrict his attention to the study of particular orders or genera, nor did the botany of India in the narrow political sense fully satisfy his love of his subject. He had visited the Malayan Peninsula and Java in 1879, primarily to study Cinchona problems in the light of the methods pursued by the Dutch in Java, and the rich and practically untouched Flora of the Malayan Peninsula irresistibly appealed to King's botanical enthusiasm. In 1889 he began the publication in the *Journal* of this Society of what he modestly called "Materials for a Flora of the Malayan Peninsula," although it is to all intents as complete as most tropical Floras can as yet be.

His activities were not confined entirely to scientific work, nor did botany only represent his scientific interest. His earliest papers to the *Journal* of this Society were zoological, and it is to his interest in the sister science that the establishment of the Calcutta Zoological Gardens was in no small degree brought about—a service that has been gracefully acknowledged by the placing in the Zoological Gardens of a bronze medallion of him, along with another of his friend and associate in the work, Lieut-Colonel D. D. Cunningham. For many years he was a Trustee of the Indian Museum and for a time Chairman of the Trust, while he also served the University of Calcutta as a member of the Senate and of the Syndicate. His connection with the Asiatic Society of Bengal dates from 1867, in which year he was elected an Ordinary Member on 4th December. Although he did not hold any of the higher offices in the Society he supported it most liberally by his contributions, amongst the most important of which were the above mentioned "Materials for a Flora of the Malayan Peninsula." The Society acknowledged his scientific eminence and his services to itself by conferring Honorary Membership upon him in 1899 after his retirement, a distinction that King specially valued. He was a Fellow of the Linnean and of the Royal and various other learned Societies, and the recipient of several medals of honour. On the eve of his retirement he was created a Knight Commander of the Indian Empire, and on his retirement his services were acknowledged by Government in a special resolution of thanks.

After serving the long period of over 26 years as Superintendent of the Botanic Garden and of Cinchona Cultivation in Bengal, King retired on the 28th February, 1898. After his retirement his health unhappily did not permit him of settling permanently in England. So he oscillated between England and Italy, spending his summers in the former country while continuing his work on the Malayan Peninsula Flora, and his winters at San Remo on the Italian Riviera. Latterly his health became more and more precarious, and he was at last reluctantly compelled to give up altogether his beloved botanical work, and to hand the Malayan Peninsula Flora over entirely to his friend Mr. J. S. Gamble, F.R.S., who had latterly collaborated with him. His last illness was mercifully brief, and occurred while he was residing at San Remo. On the 8th February, 1909, he sustained an apoplectic seizure. Fortunately two old medical friends were living at San Remo at the time, and all that possibly could be done was done. A second shock, however, supervened, against which there was no rally, and on Friday, 12th February, 1909, the end came. In accordance with his expressed wish he was buried at San Remo.

King was a man of an unassuming and kindly nature, with wide sympathies embracing many interests. The world of science

and the narrower circle of his friends are alike the poorer for his loss. His superintendentship of the Royal Botanic Gardens, Calcutta, is commemorated by a replica of the life-size bronze medallion already referred to, placed in the Herbarium. But King has left his own monument in as true a sense as Wren did his, for so long as the Botanical Garden is suffered to remain, it will keep his memory green in India, and his botanical work will endure while the love of knowledge remains amongst men.

The proposal to create a distinction among the Members of the Society, and of obtaining official recognition for the Society as a Metropolitan Institution, of which intimation has been given by Circular to all Resident Members, in accordance with Rule 64A, was brought up for discussion.

In consequence of the acknowledged position of the Society as the senior of learned Societies in India, a proposal has been made to create a distinction among its members and of obtaining official recognition for the Society as a Metropolitan Institution.

The Society would probably do well if its Membership involved some recognised qualification in science or literature. Obviously, no standard can now be defined for the Ordinary Membership of the Society, and from a financial point of view it would not be practicable to limit its membership in any way that would result in the definition of a high standard of work. At the same time, if the Society took advantage of its eminent position to create a distinction, such as a Fellowship, limited in such a way that election thereto would be recognised as a distinction of great value; and if, at the same time, only Ordinary Members of the Society were eligible for the distinction of Fellowship, there would be an incentive to workers in all parts of India to make themselves eligible for the Fellowship by application, in the first instance, for Membership. The Society, consequently, would then acquire not only an increase in the Ordinary Membership, but would include a large number of distinguished workers now in other parts of India who have joined, or will otherwise join, local institutions. It is probable that any simple attempt to declare the Asiatic Society of Bengal as the Official Metropolitan Society of India would meet with the opposition of other smaller local Societies. We should not be justified, therefore, in asking for a charter for similar recognition by Government without first establishing in a natural way the pre-eminent position of the Society itself.

The Report of the Sub-Committee appointed to consider the proposal, and accepted by the Council, is as follows:—

Resolved:—

1. That a limited number of Fellowships be created within the Society.

2. That Fellowships be given solely in recognition of literary or scientific work done.
3. That the maximum number of Fellowships at one time be 50.
4. That Fellowships be open to Ordinary Members only, and that a Fellow on ceasing to be an Ordinary Member ceases to be a Fellow.
5. That not more than 20 names shall be included in the first list.
6. That not more than 10 Fellows be elected in the second and third year, and not more than 5 in any subsequent year.
7. That the first list shall be prepared by the Council, and that the annual elections shall be made at the Annual General Meeting of the Society on the recommendations of the Council.
8. That all subsequent elections be upon the nomination of Fellows duly considered by the Council and laid before the Annual General Meeting.

The following fourteen gentlemen were balloted for as Ordinary Members :—

The Hon'ble Sir John Stanley, K.C., Kt., Chief Justice of the High Court for the North-Western Provinces, Allahabad, proposed by Mr. H. N. Wright, seconded by Mr G. H. Tipper; *Raja Prithwipal Singh*, Surajpur, Barabanki, proposed by Mr. H. N. Wright, seconded by Mr. G. H. Tipper; *Mr. W. G. Woodhouse*, Economic Botanist to the Government of Bengal, Bhagalpur, proposed by Mr. I. H. Burkill, seconded by Major L. Rogers, I.M.S.; *Dr. Chas. A. Bentley, M.B. (Edin.), D.P.H.*, proposed by Major L. Rogers, I.M.S. seconded by G. H. Tipper; *Major Edmund Wilkinson, I.M.S., L.R.C.S., D. Litt. (Camb.)*, Lahore, proposed by Major L. Rogers, I.M.S., seconded by Mr. G. H. Tipper; *Lieut.-Col. Robert Broadley Roe, I.M.S.*, Lunatic Asylum, Nagpur, proposed by Major L. Rogers, I.M.S., seconded by Mr. G. H. Tipper; *Major Norman Robinson Jones Rainier, I.M.S.*, Chhindwara, proposed by Major L. Rogers, I.M.S. seconded by Mr. G. H. Tipper; *Dr. John Newport Kilner, M.B., L.R.C.S., L.R.C.P.*, Adra, Bengal, proposed by Major L. Rogers, I.M.S., seconded by Mr. G. H. Tipper; *Babu Briz Mohon Goenka*, proposed by Babu Roormal Goenka, seconded by Mahamahopadhyaya Dr. Satis Chandra Vidyabhusana; *Professor Durga Das Bhatta, M.A.*, 22 Kumartuli Street, Calcutta, proposed by Dr. Satis Chandra Vidyabhusana, seconded by Pandit Yogesa Chandra Sastri-Samkhyaratna Vedatirtha; *Rev. Joseph Culshaw*, Minister of the Methodist and Episcopal Church, 46,

Dharamtala Street, Calcutta, proposed by Mr. D. Hooper, seconded by Rev. A. Willifer Young; *Major Fairlie Russell Ozzard, I.M.S.*, Deputy Sanitary Commissioner, Bengal, United Service Club, proposed by Lieut.-Col. F. P. Maynard, I.M.S., seconded by Major L. Rogers, I.M.S.; *Mr. G. C. Simpson, D.Sc.*, Imperial Meteorologist, Meteorological Office, Simla, proposed by Prof. J. A. Cunningham, seconded by Prof. C. W. Peake; *Mr. Walter Leather, Ph.D.*, Imperial Agricultural Chemist, Pusa, Bengal, proposed by Prof. J. A. Cunningham, seconded by Prof. C. W. Peake.

Maulavi Abdul Wali made the following remarks on Mr. Gupte's note regarding the *Khil'at* published in the Proceedings for July, 1908 :—

Mr. B. A. Gupte's note on the silk-brocade coat presented by the Maharaja of Bikaner to the proposed Victoria Hall, which Mr. Gupte exhibited, is published in the Proceedings of the Society for July, 1908 (page cii). The translation of the Persian legend is not only inaccurate, but the inference drawn from it is far-fetched.

The exhibitor explained that there were two panels—one containing the bust of a king, and the other that of a queen. Below the bust of the former was inscribed the following Persian legend :

گوئي · ايں صورت سراپا جاں شدہ

پردہ دارِ خسـرو وِ ايراں شدہ

The following translation or rather paraphrase was submitted by the exhibitor: "These are beautiful pictures, which please my heart. She has become a *parda* or zenana lady of His Majesty of Persia."

I daresay the workman (who most probably was a Persian, as appears from the description of the *Khil'at* published) must have meant something more rational in the above *bait* than the paraphrast could tell the audience. I give below a literal translation, but the full significance of the couplet must be sought, either from the Bikaner Darbār, or from those who have critically examined the coat. This is the *translation* of the *bait* in English :—

"You might say that this image had become from top-to-toe the soul

"The holder of screen to the Chosroes of Irān."

In other words : The silk-coat was so exquisitely beautiful and life-like, that if you had seen it, you might think it to be possessed of soul, and was made to do the duty of a holder of screen to the king of Irān. I believe that this *Khil'at* was designed by an Iranī for an Irānian monarch.

An officer or chamberlain, whose duty, apparently, is to screen the person of the king from the vulgar gaze is called the *parda-dār*. I fail to understand how Mr. Gupte could introduce a zenana lady (which by the by has no meaning) to embellish his fanciful picture, and why he should separate one hemistich from the context of the other. When Sulṭān Muḥammad, the Conqueror, saw the palace of the Roman Emperors at Constantinople, "a melancholy reflection on the vicissitudes of human greatness forced itself on his mind; and he repeated an elegant distich of Persian poetry" supposed to have been composed by *Firdausi*. Here is the distich :—

Parda-dārī mi kunad bar quasr-i-Qaisar'ankabūt
Būm naubat mi zanad bar gumbad-i-Afrasiyāb.

Translation.

The spider is screening the palace of the Cæsars.
The owl is beating the *naubat* on the turrets of Afrasiyāb.

The first word *parda-dārī* means the office of a parda-dār, or holder of screen. The poet here draws inspiration from the remains of the palaces of ancient sovereigns, and says that there being no one to screen the sacred person of the sovereign, the spider which has woven its nets is, so to say, doing the duties of a royal pardadār; and the hooting of the owl is a substitute for the imperial *naubat* (watch-music).

The following papers were read :—

1. *The Primitive Drawings of Baluchistan.—By* B. A. Gupte.

2. *Gehlots.—By* D. R. Bhandarkar. *Communicated by* Babu Monmohon Chakravarti.

3. *Supplement to Punjabi Dictionary, No.* 1.—*By* Rev. T. Graham Bailey. *Communicated by* Mr. H. A. Rose.

4. *Glossary or Dictionary of the Pahari Languages.—By* Pandit Tika Ram Joshi. *Communicated by* Mr. H. A. Rose.

5. *Notes on Gaur and other old Places in Bengal.—By* Monmohon Chakravarti.

6. *Two Inscriptions of Kumara Gupta I.—By* Rakhal Das Banerji.

7. *Note on a photograph of seven old Cannon.—By* H. E. Stapleton.

These papers will be published in a subsequent number of the *Journal*.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's Rooms, on Wednesday, April 14th, 1909, at 9-15 P.M.

LIEUT.-COLONEL E. HAROLD BROWN, I.M.S., in the Chair.

The following members were present :—

Dr. C. A. Bentley, Dr. Gopal Chandra Chatterjee, Captain F. P. Connor, I.M.S., Mr. J. A. Cunningham, Lt.-Col. C. R. M. Green, I.M.S., Dr. E. P. Harrison, Dr. W. C. Hossack, Lt.-Col. J. G. Jordan, I.M.S., Dr. Indumadhab Mullick, Lt.-Col. F. R. Ozzard, I.M.S., Captain H. B. Steen I.M.S., Major C. R. Stevens, I.M.S., Captain F. H. Stewart, I.M.S., Mr. G. H. Tipper, and Major L. Rogers, I.M.S., Honorary Secretary.

The minutes of the last meeting were read and confirmed.

The presentation of a number of medical works to the Society by Surgeon-General Sir Gerald Bomford, I.M.S., and Lt.-Colonel Crawford, I.M.S., was announced, and a vote of thanks passed to the donors.

The proposal to create a distinction among the Members of the Society, and of obtaining official recognition for the Society as a Metropolitan Institution was brought up for discussion.

Read a letter from the Editor of the "Indian Medical Record" asking for the Proceedings of the Medical Section in exchange for their Journal, and it was agreed to.

Specimens illustrating the flagellate state of the parasite of Delhi boil in Dr. Row's cultures were exhibited.

A paper on the Etiology of double quotidian fever and its relationship to Kala-zar was read by Dr. G. C. Chatterjee, M.B.

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15. Bengali Temples and their General Characteristics.

By Monmohan Chakravarti, M.A., B.L., M.R.A.S.

Introductory.

Beṅgali temples are more or less familiar to us. They lie scattered in the great metropolis; with ghāṭs and orchards they line the river banks; and in the interior away from the rivers they mark the sites of various old places. Not so big and massive as the Orissan towers, not so lavishly and elaborately carved as the vimānas of the south, they still attract attention from their fine carvings and peculiar roofs; and no history of Indian architecture would be complete that overlooks these "sermons" in brick of the Beṅgali masons. The following notes, scanty and imperfect as they are, have been jotted down, in the hope that they may draw attention to an important subject and indicate how rich the field is in this direction.

Extent.

The temples are called Beṅgali, because they are found almost exclusively in the Beṅgali-speaking area. But a few can be traced, outside this area, in localities where the influence of Beṅgalis had penetrated. Eastwards, near Maibaṅg, the old capital of Kācār, a hut of this type has been carved out of a boulder with an inscription dated 5th Mārgasirṣa 1643 śaka (Nov. 1721 A.D.)[1]; and further north-east in Sibsāgar town, a temple of Kālī in *pañca-ratna* type can still be seen. Southwards in Purī town a Beṅgali temple rises on the south bank of the Mārkaṇḍa tank, said to have been built in the first half of the 18th century under orders of the Bardwān Rājā Kīrtticandra. Westwards, in Bilhāri, the old capital of the Cedi Kings, district Jabbalpur, C.P., a Beṅgali *Pañca-ratna* temple has been lately discovered[2]; and further westward, in the tomb of Rājā Baktāwar at Alwār, Rājputānā, additions with Beṅgali curved cornices have been found.[3]

Material.

The temples are usually in brick, the main building material available thoughout the greater part of Bengal. The bricks in the older temples are thin and well-baked; occasionally reddish as in the Rāmcandra temple of Guptipāṛā. The carvings are on thin brick tiles panelled. On the western border, where laterite and to some extent sandstone can be quarried, these materials are

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1 *Arch. Sur. Beng. Circle*, Annual Report for 1902 3, p. 22, para. 25; p. 20, para. 24.

2 *Arch Sur. East Cir.*, 1907-8, pp. 20–1; para. 23.

3 *Hist. Ind. and East. Arch.*, Fergusson, p. 474, woodcut 267.

sometimes used, as in Garui, thānā Assensol, district Bardwān, in Viṣṇupur, d strict Bānkurā, and in the suburb of Midnāpur town (Neṛājol Rāj temple). These have, however, very few carvings.

Platform.

The temples stan d on a raised platform, wide and fairly high, often 4 to 6 feet above the court-yard level. The platform has in front occasionally steps, as in the Raghunāth of Bāxā, Hugli, but is preferably panelled, without any carvings.

Body.

The body of the temple consists of the sanctum, generally with various additions. The sanctum is oblong, sometimes cubical, with the insides plain, or occasionally painted as in Bṛndāvan-candra of Guptipāṛā. The sanctum has, as a rule, a covered verandah in front. Other additions may also be found, such as extra covered verandahs on both sides, or running on all the sides, with rooms in each corner. In tower-crowned temples, one of the front corner rooms has a staircase leading to the roof. In grouped temples, the individuals are on very simple plans, wanting verandah or rooms.

Front of the Body.

The verandah has usually three arched openings between two pillars. The arches are pointed, cusped outside and generally 16-cusped. The pillars from which the arches spring are short, thick, heavy-looking, square above and below, with two or more thick bands round the central shaft. The architrave is marked out from the upper part of the front by a series of curved lines, and the arched portion is similarly distinguished from the sides of the front. These side portions end in well-defined corners whose horizontal bands and vertical lines or panels simulate the appearance of buttressing towers.

Carvings.

In the older brick temples, the spaces between the arches, between the curved lines and the roof-base, and on the sides are covered with carvings. The carvings are mostly on brick panels; and in the recent ones, in lime and plaster. Panels of processions line the base, panels crowded with soldiers, horse-men and elephant-riders. Above them appear square or rectangular panels depicting in Vaiṣṇava temples Rādhā-Kṛṣṇa in various attitudes (often amatory) or exploits of Viṣṇu in some of his incarnations, and in Śaiva or Śākta temples the exploits of Śiva or his consort, Kālī or Durgā. With them are mixed panels of rosettes or geometrical patterns; and in some instances miniature temples are piled one above the other along the arched openings. The base of the roof is marked by a row of rails or square beam-ends. The massing of these minute and varied works gives a charm to the whole front and is decidedly effective. Besides the verandah, the inner sanctum is often covered in front with carved panels, which are, however, simpler and

less varied (rosettes being the favourite). In some modern temples, the front of the sanctum is painted, as in Bṛndāvan-candra of Guptipāṛā.

Roofs.

In the roofs, however, a great diversity is observed, a diversity with such large differences that the latter serve to classify the various temples in Bengal. They may be broadly divided into :—

A. The Hut-roofed.

B. The Bungalow-roofed.

A. Hut-Roofs.

In the sub-class A, the roof is modelled after the ordinary *caucālā* hut. It has coverings on four sides, which are more or less curved, in some domical, in others flatter, but never straight or pyramidal; and secondly the coverings have eaves drawn out lower down to a point at each corner, thus making the roof-base curved like the segment of a circle. In the ordinary Beṅgali huts the flexible bamboo eaves are drawn out to permit the rapid draining of rains, so heavy in Lower Bengal.

Varieties—
1. Spired.

The simplest variety is more or less domical, ending in a spire only, *e.g.*, the Purī temple on the Mārkaṇḍa tank, first half of the eighteenth century, probably built by Rājā Kīrtticandra of Bardwān to commemorate his mother's visit to Jagannāth. Its top has three spires flanked on each side by a lion on its haunches. The stone temple of Garui, district Bardwān, now without its spire and half the dome, apparently belongs to this variety.[1]

2. One-towered.

Further development is marked by the substitution either of a spired tower or of a spired duplicate on the roof. In the tower form the pyramidal top reminds one of the Orissan porch; and in several western examples, the pyramid has even a projecting straight cornice, *e.g.*, the Madanmohan of Viṣṇupur town, 1000 Mallābda (1694-5 A.D.),[2] and the laterite temples of Viṣṇupur fort, Lālji and Rādhāśyām, 964 and 1064 Mallābda (1658-9 and 1758-9 A.D.).[3] The eastern sub-variety, with towers having curved cornices, may be seen in the Viṣṇu of Bānsberiā, Huglī, 1601 śaka (1679-80 A.D.) built by Rājā Rāmeśvara Datt,[4] and in the Rāmcandra of Guptipāṛā,[5] built according to tradition towards the end of eighteenth century by Rājā Hariscandra Rāy of Seoṛāphuli.

3. Multi-towered.

Single towers gradually developed into multi-towers; but the intervening steps, if any, cannot be traced, as in the existing remains the

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[1] See figure 1. [2] See figure 2.

[3] *A.S.R.*, vol. viii, p. 204, Nos. 9, 5 and 14; *cf. Ar. S. Ind.*, 1903–4, pp. 49–52.

[4] *A Short Account of the Sudramaṇi Rājās*, 1902, or enlarged, *The History of the Bansberia Rāj*, 1907

[5] See figure 3.

oldest are the multi-towered. The towers on the roof may be five or *Pañca-ratna*, *i.e.*, a tower in the centre with four smaller towers on four corners; they may be nine or *nava-ratna*, *i.e.*, in addition to the four corner towers, five small ones on the central big tower; or they may be many, seventeen or twenty-five, *i.e.*, tiers of towers running up the sides of the domical roof crowned by a large tower. The names *Pañca-ratna* and *nava-ratna* were known to Buchanan and Revd. Ward.[1] They were common in the 17th and 18th centuries, developing into 25-towered in the latter century, but have now disappeared. These temples were, as a rule, lavishly ornamented in front, having many fine carvings. Noted examples of the *Pañca-ratna* or five-jewelled type occur in Viṣṇupur town, the Śyāmrāya *alias* Buḍhā (old) Rādhāśyām, the oldest temple of the hut-roofed sub-class, dated 949 Mallābda (1643-4 A.D.),[2] in Candrakonā, Ghāṭāl, Midnāpur, the temple of Rāmeśvara dated 1577 śaka (1655-6 A.D.), in Goāltore, Thānā Garhbetā, Midnāpur, the half-ruined temple of Bālcandra, about the middle of the eighteenth century, in Maḥmūdābad, Jessore, the Kṛṣṇa temple built by Rājā Sītārām Rāya (Bisvās) in 1625 śaka (1703-4 A.D.), and in Jāpsā, Vikrampur, Dacca, the temple of Lālā Rāmprasād Rāy, first quarter of eighteenth century. The *nava-ratna* or nine-jewelled type, which is rather later, may be studied in the Raghunāth temple of Bāxā, Huglī, *circa* 1199 Beṅgali *sana* (1793 A.D.),[3] the ruined temple of Damrāil, Sātkhirā, Khulnā, ascribed to the father of Pratāpāditya, 4th quarter of the sixteenth century, and the Śrīkānta temple of Kāntanagar, Dinājpur, begun in 1644 śaka (1722-3 A.D.) by Rājā Prāṇnāth Rāy and completed by Rāmnāth Rāy.[4] The 17 or 25-towered type, produced evidently under the influence of the Benares style (*cf.* the 13 towered Haṁśeśvarī of Bānsberiā, Huglī), has survived, the former in Buḍhā Śiva temple of Raghunāthpur, Candrakonā, and the latter in the two main temples of Kālnā, Bardwān, Kṛṣṇa-candra dated 1764 A.D. and Lālji of nearly the same time,[5] both built by the Bardwān Rāj family, and in the now dismantled Rādhā-Kṛṣṇa temple of Rājā Rāmnāth Ray, 1667 śaka (1745-6 A.D.), in Gopālgañj, Dinājpur.[6]

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[1] M. Martin, *Eastern India*, vol. ii., p. 925; *Hindoos*, 1817, vol. ii, p. 7.

[2] *A.S.R.*, viii., p. 204, No. 2; *cf. Ar. Sur. Ind.*, 1903–4, pp. 49-52. For this finely carved temple, see figures 4 and 5.

[3] See figure 6.

[4] *Hist. Ind. Arch.*, pp. 466–7, and woodcut No. 263, *Ar. S. Beng. Cir.*, 1901–2, pp. v, vii. The temple is said to have cost two lakhs of rupees (*East India*, ii, p. 926).

[5] For Lālji temple, see figure 7.

[6] For a litho of the Rādhā-Kṛṣṇa temple, Gopālgañj, see plate xi, frontispiece to *East India*, vol. ii (wrongly called "pongcho-ratno").

4. **Duplicated.**

The majority of the Beṅgali temples, however, belong to the variety capped with a duplicate. This top-structure is only a repetition of the main hut-roofed temple, with one, three or five spires. Though begun later, this type has now superseded all the other varieties. It includes several famous temples, but is architecturally less interesting, having few carvings, and these chiefly in lime and plaster. Some like Bṛndābancandra are painted, having been evidently touched up in recent times. The famous temple of Kālighāṭ, Calcutta, without any inscription, was built according to tradition 300 years ago; it had become already famous in the sixties of eighteenth century when Rājā Nabakissen of Calcutta spent a lakh of rupees in a visit to the goddess.[1] The small temple of Melā-i Caṇḍī in Āmtā, Howrah, is said to have been erected in 1056 Beṅgali *sana* (1649-50 A.D.); the Lālji temple of Candrakonā, Ghāṭāl, has a loose inscription dated 1577 śaka (1655-6 A.D.); and the temple of Daśabhujā in Maḥmūdābād, Jessore, was built by Rājā Sītārām Rāya, in śaka 1621 (1699-1700 A.D.). The biggest temple of the variety is Syāmcānd of Śāntipur, Nadiā, built in 1648 śaka (1726-7 A.D.) by Rāmgopal Khān Chowdhry and his three brothers of weaver caste.[2] According to tradition its construction cost a lakh of rupees, its consecration another lakh, and a third lakh was paid to the zamindār for permission to erect, while the Rājā of Kṛṣṇanagar (the zamindār) presented a lakh at the time of his visit during consecration. Among other notable specimens, all of the eighteenth century, may be mentioned Gokulcānd of Śāntipur, Bṛndābancandra and Kṛṣṇacandra of Guptipāṛā, Baidyanāth of Kālnā, the temple of Tārakeśvara, and the Śaiva temple of Uttarpāṛā, Huglī. Curiously enough, since the beginning of the nineteenth century no large temple either of this variety or of any other variety has been built in Bengal.

5. **Temple-Groups, 12 or 108.**

In the duplicated variety further progress took place not in the multiplication of structures above roof, but of the temples themselves. The temples were increased to twelve (hence called *dvādaśa-mandira*), or to one hundred and eight, exclusive of a main temple, both the numbers being held sacred. This increase apparently so much exhausted the funds, that the individual temples had to be left plain and small. Groups of duplicated temples exist in Bāxā, Iśāneśvara (12), said to be of nearly the same age as the neighbouring Raghunāth 1781 (1187 B. S., A.D.), and in Bardwān District, Nawāb-hāṭ liṅga (108 + 1), 1788 A.D., grouped on the four sides of a mango garden, and

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[1] Ward, *Hindoos*, vol. i, pp. 160–1. For a distant photo of the top of Kālighāṭ temple, see J. C. Oman's *Brahmans, Theists and Muslims*, 1907, p. 6.

[2] See figure 8.

Kālnā (108 + 1) dated 1809 A.D., grouped in an outer and an inner circle, both built by Bardwān Rāj family. These duplications are so much evidence of degeneracy in the style, the individual temples showing no peculiarities.

Peculiar Temples.

The Rās-mañca, outside Viṣṇupur fort, is rather peculiar. It is surrounded by long covered verandahs, with ten arched openings (pointed) on each side. Its roof lies broken and is partly gone. To judge from the remains, the nearly straight roof had on its top in the centre a tall duplicate (? a pyramidal tower), and on the edges of each side six small duplicates. The Malleśvara in Viṣṇupur town, 928 Mallābda (1622-3 A.D.) has lost its roof. It can hardly be called a temple of the Beṅgali style, as the base of the roof is straight and the body has no arched verandah, but has on the other hand a plinth and a cubical shape like Orissan temples. The doorway has, however, a quarterfoil arch over it, quite unlike the Orissan type. An octagonal Śaiva temple, with an octagonal roof, is found at Barnagar, Murṣidābād District.[1] Two octagonal buildings exist also in Mahmūdābad, Jessore, of which the two-storeyed temple of Lakṣmī-Nārāyaṇa was built by Sītārām Rāya in 1626 śaka (1704-5 A.D.). They remind us of the octagonal tombs of the Afghāns, such as of Sher Shāh at Sāserām, and of Bakhtyār Khān at Cainpur, both in the district of Shāhābād.

B. Bungalow-Roofs.
1. Spired.

In the second sub-class the roof is adopted from the bungalows, cottages with roofs having two sloping sides ending in a ridge. In the existing temples the triangular roofs are doubled, the ends looking like a big **M**, and the buildings are called *joṛ-bāṅglā* (from *joṛ* = joined or *joṛā* = doubled). The simplest variety has only spires, *e g.*, the temple of Caitanyadeva, Guptipāṛā, where the spires are represented by two iron spikes (one on each roof).[2] According to the MS. record of a local paṇḍit, this temple was built in Akbar's time, or beginning of the 17th century; and this fairly old date is supported by its archaic look, thin bricks and simple arches. An old *joṛ-bāṅglā* of the time of Ḥusain Shāh (the first quarter of the 16th century) is reported to have existed at Bhavānīpur, a sacred place, 36 miles N. E. of Nātor, Rājshāhi; but it fell down in the earthquake of 1885. Similarly the temple of Balarām in Maḥmūdābād, Jessore, ascribed to Sītārām Rāya, had *joṛ-bāṅglā* roofs, but none now exists. According to *Badshah-nāma*, the Portuguese in the last quarter of sixteenth century "erected several houses in the Beṅgali style" in Huglī town.[3]

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[1] *Ar. Sur. East-Circle*, 1905-6, p. 12, para 6. For Sher Shāh's tomb, see *Hist. Ind. Arch.*, p. 517, woodcut, No. 288.

[2] See figure 9 for this old temple.

[3] Elliot, vol. vii, p. 31.

What sort of house is referred to by this expression, if not to bungalows ?

2. Duplicated.

Further development took place, firstly in adding on the top a hut-roofed structure, and secondly in grouping together several *joṛ-bāṅglās*. The former type has survived, *e.g.*, in Viṣṇupur, Kṛṣṇa Rāya's *joṛ-bāṅglā* and the broken one, dated respectively 961 and 1040 Mallābda (1655-6 and 1734-5 A.D.),[1] and in Bardwān District at Kālnā. A group of such temples may be also seen at Baranagar, Murśidābād (opposite Jiāgañj),

3. Group.

four *joṛbāṅglās*, one at each corner of a large tank.[2] They were built about 1755 A.D. by the famous Rāṇī Bhavānī of Nāṭor at a cost of twelve lakhs. The *joṛ-bāṅglā* type ceased to be built in the nineteenth century.[3]

Age of Beṅgali Style.

The question might naturally be asked, how old is this Beṅgali style, is it pre-Musalman or is it much later ? No satisfactory answer is as yet possible, because no old buildings have yet been brought to light intact. There can be no doubt that the huts and bungalows after which they are modelled had been existing from time immemorial ; and that Hindu temples, Buddhist vihāras and Jaina sanctuaries existed in old days, having been mentioned in pre-Musalman works, while some of their remains might be traced from fragments fixed up in the early Moslem mosques and tombs of Gaur, Pāṇḍuā, Trībenī and elsewhere. But these religious buildings have disappeared through the ravages of time (sun, wind, rains, vegetation, etc.), the diversion or encroachment of rivers, iconoclastic zeal of Islamic forces, or the cupidity of brick or treasure-hunters. In this connection Draupadī's Rath at Māmallapuram (old Mahāvellipore), near Madras, deserves notice. This rock-cut temple has a curved four-sided roof, somewhat like the Beṅgali *cau-cālā* roof excepting that the eaves are not drawn out, and its date has been put in the Pallava reign, or approximately in the seventh century. A.D.[4]

Existing Remains, Post-Musalman.

Whatever doubts may be felt as to the period in which the Beṅgali roofs were adopted in general architecture, none can arise as to the time of the existing remains. Not one of them can be authentically put before the seventeenth century, A.D. In fact they are all post-Musalman, and betray unmistakable signs of the influence of the Indo-Saracenic architecture in its Beṅgal style. The pointed arch with its outside cusps, the short heavy thick-banded arch pillars, the simulating

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[1] *A.S.R.*, viii, pp. 204-5, Nos. 3 and 12. For Kṛṣṇa Rāya's *joṛ-bāṅglā* temple, see figure 10.

[2] *Ar. Sur. East Cir.*, 1905-6, p. 12, para 6.

[3] Revd. Ward remarked on these "Yorŭ-bangalas" that they "are not now frequently seen in Bengal," *Hindoos*, 1817, vol. ii, p. 8.

[4] See figure 11.

towers at the corners, the panelled carvings and the frequency of rosettes and geometrical patterns in the carvings, all remind us of the later tombs and mosques of Gaur and Pāṇḍuā. As regards the roof too, the hut-type, with the base curved, is found adopted in the Eklākhi tomb of Pāṇḍuā and the bungalow type (the triangular roof) in Fath Khān's tomb of Gaur fort.[1] Moreover, the multi-towers on the roof remind one of the kiosk groups on the top of the later Afghān tombs, such as of Hassan Khān Sūr and his son Sher Shāh in Sāserām or of Bakht-yār Khān's in Cainpur, Shāhābād, in which the central dome is surrounded by four or eight kiosks and is capped by a pinnacle or another kiosk. The similarity of the pyramidaltopped towers to Orissan porches, and of the arrangement of the multi-towers to that of the Benares fashion also bespeak of later times.

Beṅgali Musalman Style.

Adaptations from Orissan or Benares style are not unusual, both being Hindu and akin in essence. But adaptations from Musalman architecture are *primâ facie* surprising, and require explanation. No adequate explanation is possible, because we know so little of the mediæval history of Bengal, but some of the causes are dimly discernible. Firstly, during the rule of the independent Sulṭāns, a large number of works were constructed, which created a new style of Indo-Saracenic architecture, the Beṅgali style. This style by means of its massive remains often of excellent workmanship, its big vaults, wide corridors, numerous domes, profusely carved brick panels and beautifully coloured glazed tiles, deeply influenced contemporary architects. Its influence is traceable in the works of Sher Shāh's dynasty, and still more in Akbar's edifices. Speaking of "Agra the Royal residence," the *Aín* remarked:—"It contained more than five hundred buildings of masonry after the beautiful designs of Bengal and Gujerat which masterly sculptors and cunning artists of forms have fashioned as architectural models."[2] A part of Akbar's new palace in the Agra fort was called specifically the Beṅgali Maḥal,[3] presumably because it was built after that style. Miserable as the present remains in Māldā district are, they led Mr. Fergusson to remark:—"It is not, however, in the dimensions of its buildings, or the beauty of their details that the glory of Gaur resides; it is in the wonderful mass of ruins stretching along what was once the high bank of the Ganges, for nearly twenty miles, from Maldah to Maddapore—mosques still in use, mixed with mounds covering ruins—tombs, temples, tanks and towers, scattered without order over an immense distance, and half-buried in a luxuriance of vegetation which only this part of India can exhibit."[4]

Influencing by its Remains.

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[1] See figures 12 and 13.

[2] *Aín i Akbari*, transl., ii, p. 180.

[3] Completed in 970 H. (1562-3 A.D.), according to Al-Badaoni, transl., i, p. 74.

[4] *Hist. Ind. Arch.*, pp. 550-1.

And by closer Hindu-Muslim Relations.

A style that served as model to the great emperor's architects and extorted admiration from foreign critics could not but influence powerfully the local masons, albeit they were Hindus. This influence was strengthened by the rather closer relations then subsisting between the Hindus and the Musalmans in Bengal. When the Sulṭāns became independent, connection with Delhi or the western provinces (the home of foreigners) was more or less cut off. The nobles and officers of the Sulṭāns grew more social with their Hindu neighbours and subjects, a relation which was not much disturbed by the intrusion of foreigners, a few refugees and traders By this closer social relation, and from their political domination, superior activity and greater freedom from social restrictions the Musalman rulers could and did produce a stronger effect on the Hindus than had been done before. This fact when properly grasped explains to some extent various contemporary facts such as the success of the Musalman saints, the conversion of a considerable number of Hindus, the inclusion of the worship of *pīrs* like Satyapīr in current Hindu faith, the free acceptance of patronage by Beṅgali poets from their Moslem neighbours, and also the wholesale adoption of Indo-Saracenic details in the Hindu religious buildings.

Hindu Revival in 15th and 16th centuries.

This closer touch with the Musalmans also stirred the dormant activities of the conservative Hindus. Hence during the later Islamic rule in Bengal, a Hindu revival is distinctly traceable. This revival began early in the fifteenth century with the seizure of the Bengal throne by the Hindu zamindār Gaṇeśa, and with the continuation of his dynastic rule for the third of a century. In the second half of the same century it spread in two directions, on one side in social reorganisations among Brāhmans and Kāyasths, on the other side in the encouragement of learning, *viz.*, revival of Sanskrit learning at Navadvīp and elsewhere and the nourishment of vernacular literature by songs and stories about Rādhā-Kṛṣṇa and Caṇḍī, or by translations from the Sanskrit epics and Purāṇas. The following century saw its further progress in the revivified religious beliefs, specially the Rādhā-Kṛṣṇa worship through the preaching and singing processions of Caitanya, his associates and followers.

Felt early in Local Architecture, Musalman and Hindu.

The force of this revival was felt in local architecture, and is traceable even in the Musalman edifices. I can trace its effect to an early period, *e.g.*, in the splendid Eklākhi tomb of Haẓrat Pāṇḍuā, one of "the finest examples of the Bengali tomb," where according to the most reliable of the traditions, the converted son of Rājā Gaṇeśa, Sulṭān Jalāl-ud-dīn Muḥammad, his wife and his son

Sulṭān Shams-ud-dīn Aḥmad lie buried.[1] It is a brick-basalt tomb showing already the curved roof of the Beṅgali hut, and the carved brick tiles. Similar carved tiles and curved roofs became the peculiar characteristics of the later Musalman buildings in Bengal, *e.g.*, Hemtābād mosque, Dināǰpur (906 H.), the Ḳuṭb-Shāhi or golden mosque of Pāṇḍuā (990 H.) and in Gauṛ, Ḳadam Rasul mosque (937 H.), Janjan Miyān's mosque (941 H.), Fath Khān's tomb (date uncertain),[2] and the small golden mosque of Fīrozpur (time of Husain Shāh 899—924 H.), also in the mosque at Bāghā, Rājshāhi (930 H.), and in the tomb of Khān Jahān, (who died on 26th Zil-hijjah 863 H.), Bāgerhāt, Khulnā. The way was thus paved for the present Hindu style in Bengal, which, receiving a great impetus from the religious ferment of the sixteenth century, spread ultimately from the edifices of Rādhā-Kṛṣṇa faith to those of the Śaiva and Śākta faiths.

Illustrations of Types.

As the architectural details cannot be well understood without the help of illustrations, a few selected photographs are annexed. The undermentioned memo. may facilitate reference to the plates:—

A. Hut-roof.

(1) With simple spire—Garui, District Bardwān.
(2) With one tower on the roof —Madanmohan, Viṣṇupur, Bānkurā.
(3) Do. eastern sub-variety—Rāmcandra, Guptipāṛā, Huglī.
(4) With five towers on the roof —Śyāmrāya, Viṣṇupur.
(5) Do. details of carvings, do.
(6) With nine towers on the roof—Raghunāth, Bāxā, Huglī.
(7) With 25 towers on the roof —Lālji, Kālnā, Bardwān.
(8) With one duplicate on the roof—Syāmcānd, Sāntipur, Nadiā.

B. Bungalow-roof.

(9) Double-roofed, with

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[1] *Riyaẓu-s salāṭin*, translation, p. 118; cf. *A.S.R.*, xv, pp. 88-9. For the remark of Cunningham about Eklākhi tomb, see *A.S.R.* iii, p. 11. See figure 12 for the tomb.

[2] See figure 13. Fath Khān's tomb in Gauṛ Fort has lost its inscription, if any. According to a tradition recorded in *Khurshīd Jahān Numā* of Sayyad Ilāhi Bakhsh, Fath Khān was son of one Diller Khān, who was deputed by the Emperor Aurangzeb to put to death Shāh Ni'mat-ullāh suspected to have instigated Shāh Shujāh to go to war. But before he could carry out the orders, his son Fath Khān died in Gauṛ from blood-spitting and was buried in this tomb (J.A.S.B., 1895, p. 218). Ni'mat-ullāh died in 1075 H., or according to another account 1080 H. (Do., p. 224); and therefore Fath Khān had died before this year probably at the time of Diller Khān's pursuit of Shāh Sujāh in 1069 H. (*Riyāz*, trans., p. 221). At the same time it appears, from an inscription found at Molnātali, near old Māldah, that a mosque door was built by one Khān Mu'azzam Fath Khān in 930 H. (*Gaur*, p. 90, inscription No. 11), a date which fits in with the date of the adjoining Ḳadam Rasul mosque (937 H.).

simple spires—Caitanya, Guptipāṛā, Huglī.

(10) Double-roofed, with one tower on the roof—Kiṣṭarāya's *joṛ-bāṅglā*, Viṣṇupur.

C. History.

(11) *Cau-cālā* roof — Draupadī's Rath, Māmallapuram, Madras.

(12) Musalman hut roof — Eklākhi tomb of Hazṛat Pāṇḍuā, Māldā.

(13) Musalman Bungalow roof — Fath Khān's tomb, Gauṛ fort.

FIG. 1.—Stone Temple at Garui, Bardwān.

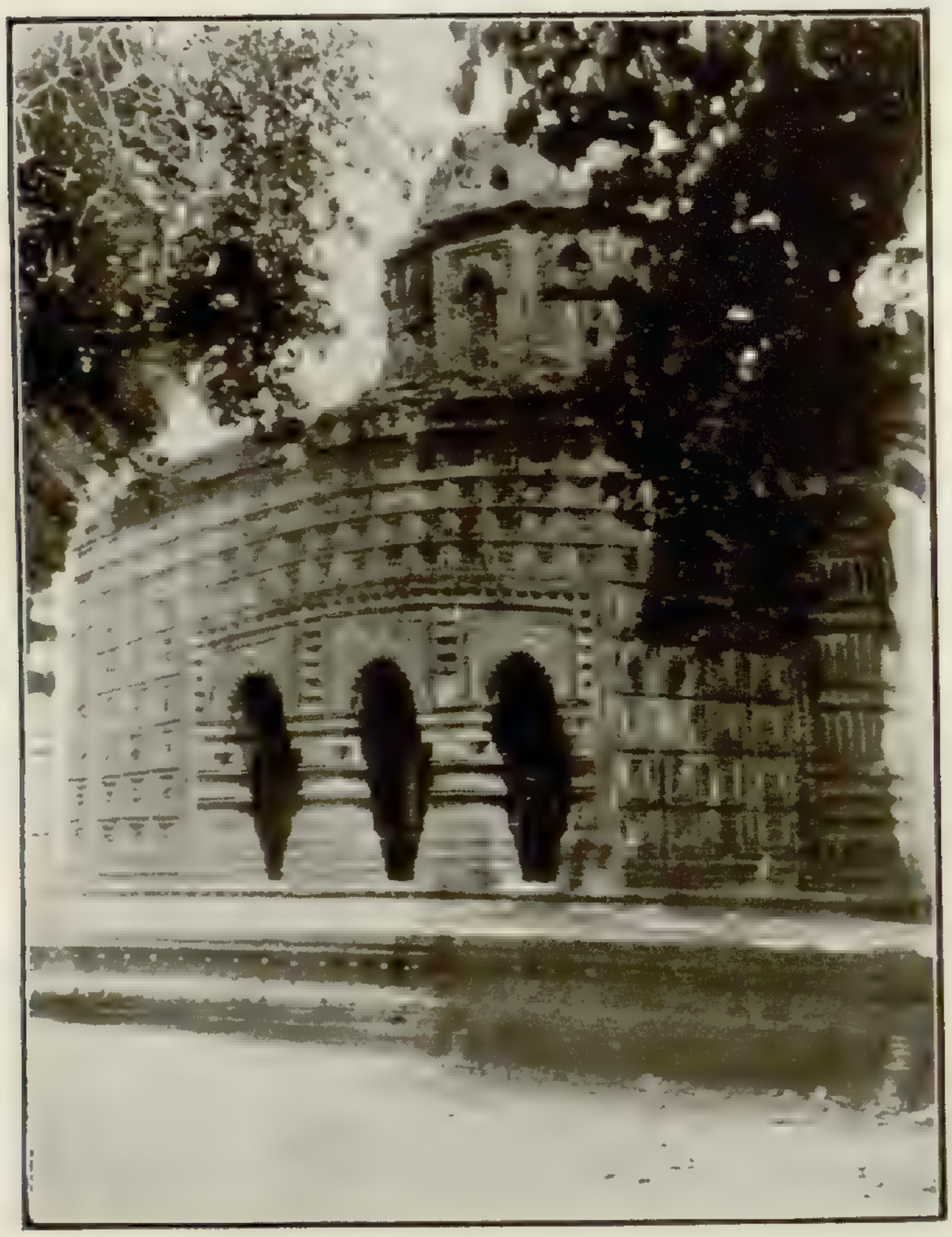

FIG. 2.—Madanmohan Temple at Viṣṇupur.

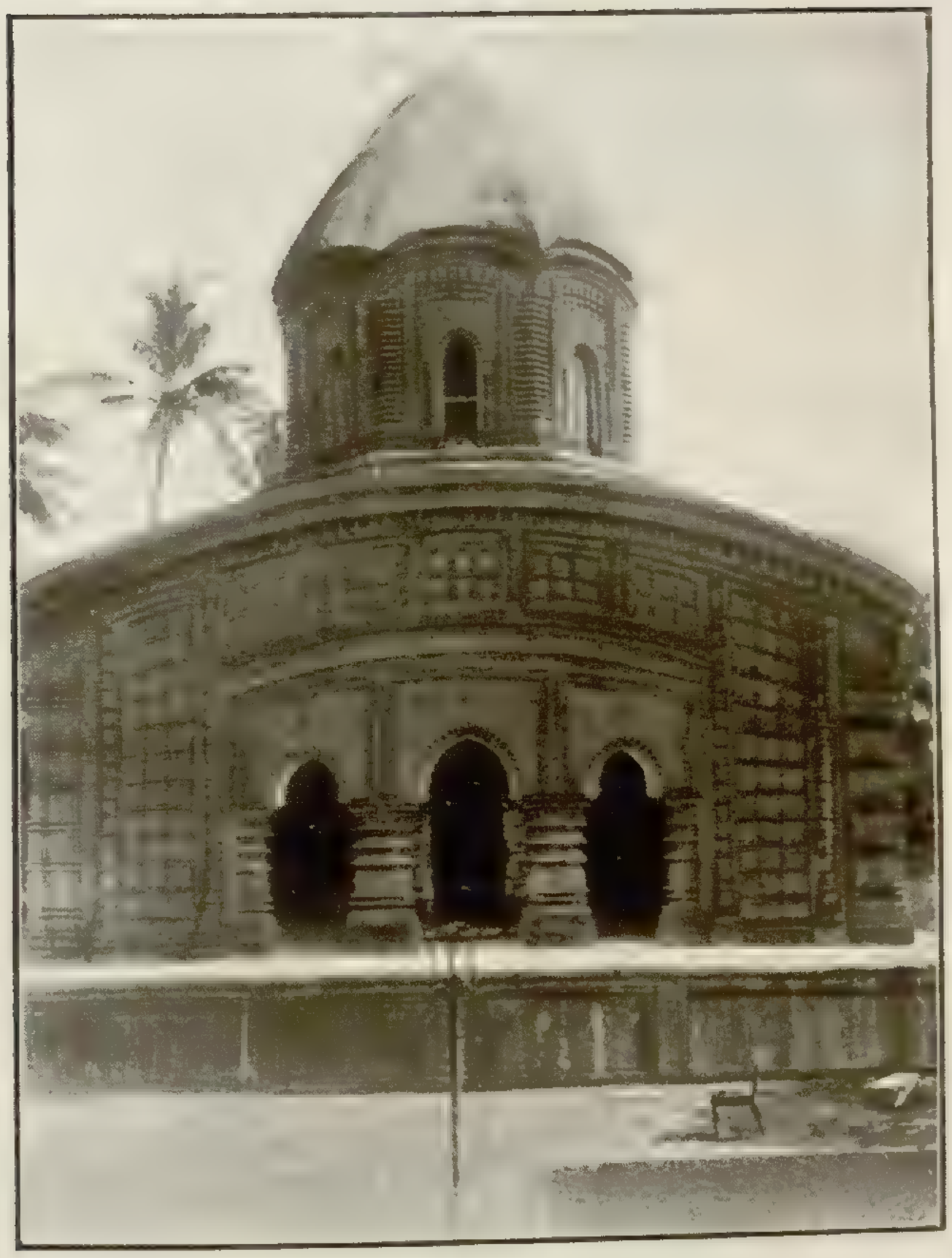

FIG. 3.—Rāmcandra Temple at Guptipāṛā, Huglī.

FIG. 4.—Pañcaratna Temple of Śyāmrāya at Viṣṇupur

FIG. 5.—Carved front of Śyāmrāya Temple.

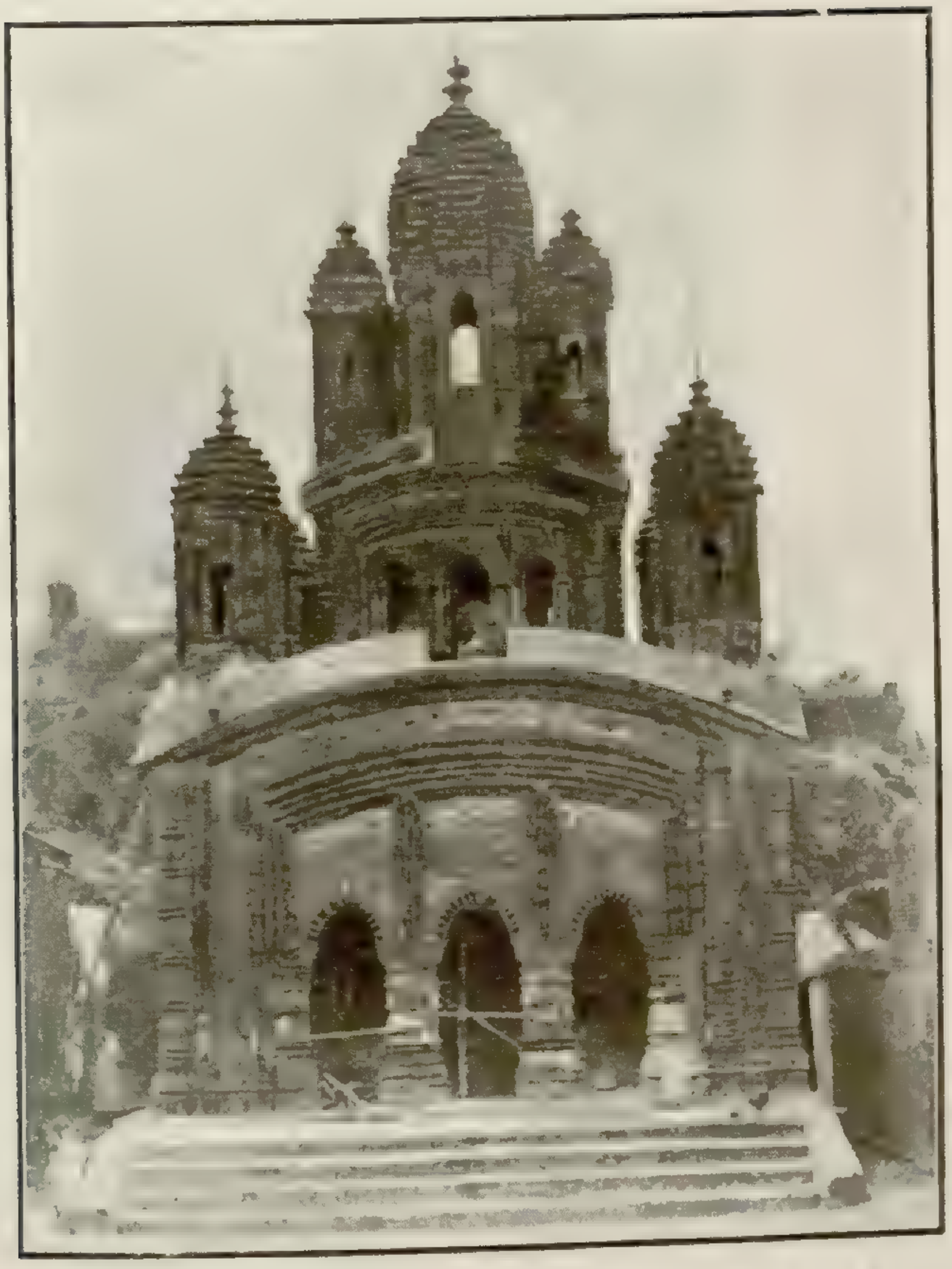

Fig. 6.—Navaratna Temple of Raghunāth at Bāxā, Huglī.

Fig. 7.—Lāljī's Temple at Kālnā, Bardwān.

FIG. 8.—Syāmcānd's Temple at Sāntipur, Nadiā

FIG. 9.—Joṛ-bāṅglā Temple of Caitanya at Guptipāṛā, Huglī.

FIG. 10.—Kiṣṭarāya's Joṛ-bāṅglā Temple at Viṣṇupur.

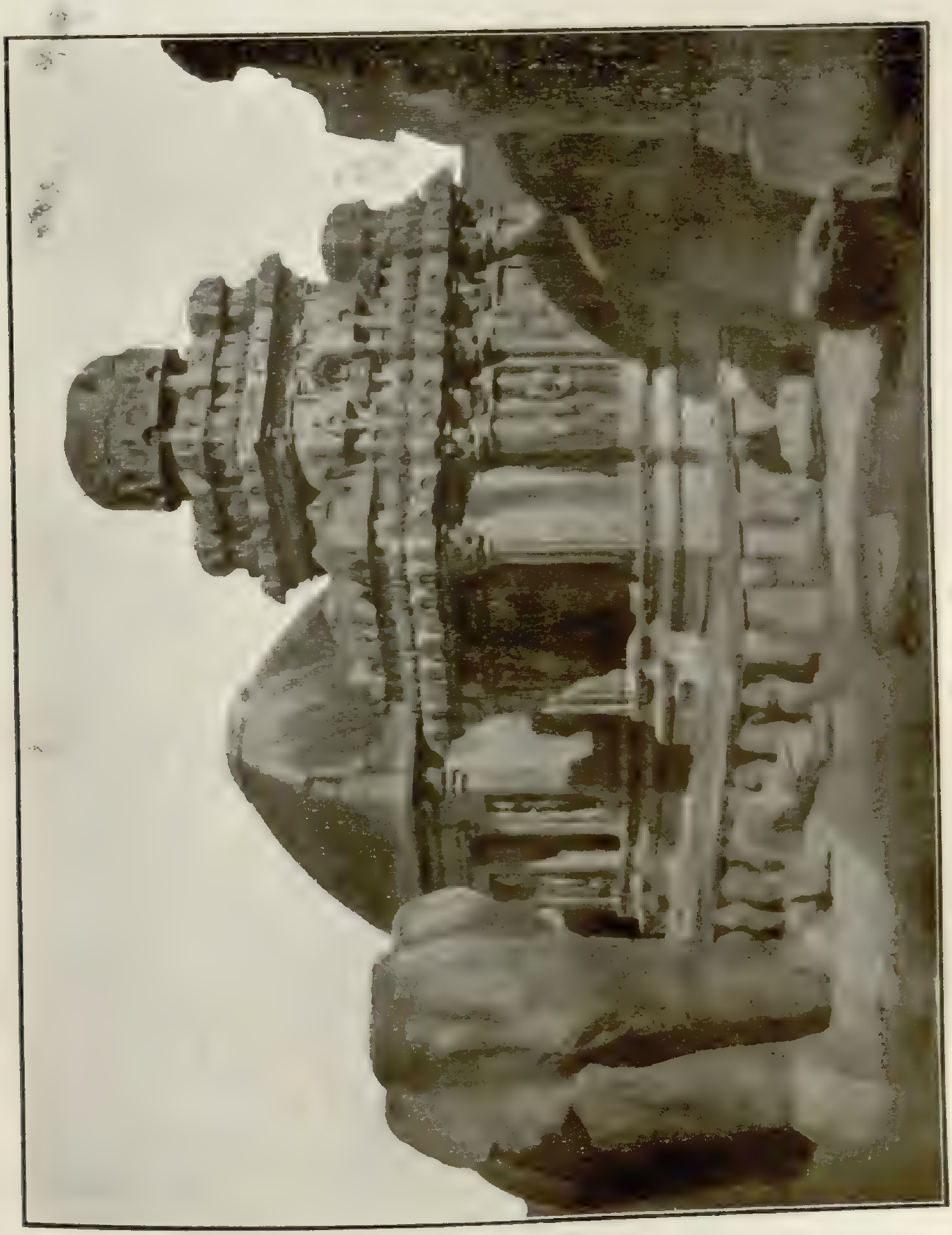

Fig. 11.—Draupadi's Rath at Māmallapuram, Madras.

FIG. 12.—Eklākhi Tomb at Pāṇḍuā, Māldā.

FIG. 13.—Fath Khan's Tomb in Gaur Fort.

16. The Mallayaṣṭikā Grant of Nandana.

By Parameśvar Dayāl, *Gayā*.

In January 1909 one Paṇḍit Nāgeśvar Misir of Belsār in the Gayā district informed me that Babu Jānkī Ballabh Nārayān Siṁha of mauza Amauna, perganā Arwal, zilla Gayā, was in possession of an old copper-plate inscription recently discovered in his village Amaunā. At the instance of my friend (the said Paṇḍitji) Babu Jānkī Ballabh Nārāyan kindly brought the plate to me, and desired me to decipher it.

The Babu told me that in Aghan 1315 F.S., corresponding to December 1907, the plate was found by the wife of one Dhaniā Dusādh in the fields of Bheṇḍiā Bīghā, a hamlet of mauza Amaunā. It came to view after the surface soil had been washed away a little by rain. The site of the find is said to be an elevated land which is *paḍti* "uncultivated" and of the class called *rerhā*, a kind of saline unproductive soil, on which even grass does not grow, and which becomes soft and loose in the rainy season. There are, however, no indications of ruins at this particular spot, though to the north-west of it, at a distance of about a quarter of a mile, is a *ṭilha* "mound" considered to be the site of an old mud fort.

The village of Amaunā is about 2 miles east by north of the well-known town and market-place Dāūdnagar, which is situated on the east bank of the river Son in the Gayā district.

I made some impressions of the plate on thin paper, and sent some copies of it to Dr. Bloch, the Superintendent of the Archæological Survey, Bengal, and at his instance a loan of the plate has since been secured by the Magistrate of Gayā from the Babu and forwarded to Dr. Bloch.

The plate is about $9\frac{1}{3}$" long and $5\frac{1}{2}$" broad, with a projection on the left side containing a rectangular hole to keep the plate hanging on the wall. The inscription consists of eight lines of Sanskrit written in characters of the sixth century A.D. It is in prose throughout with the exception of an imprecatory verse. The object of the inscription is to record the grant of the village Mallayaṣṭikā to a Brāhmaṇa named Ravisvāmin of the Gārgya gottra and the Yajurveda (*Vājasaneya Brahmacārin*) by a subordinate chieftain (*Kumārāmātya-Mahārāja*) named Nandana on the 20th day of the month of Mārgga in the (Gupta) year 232. The last line contains the date and two peculiar phrases :—

(1) *Svamukh-ājñā—lit.*, order out of own mouth, meaning most probably "by the oral order of the king" : cf. *Svahastoyam-*

mama in the grants of the Maitrakas of Valabhī and the Madhuban grant of Harṣa of Thānesar.

(2) *Śūdrakarād-rakṣunaḥ*—"protection from the hand of the Śūdras." This phrase has not as yet been found in any other copper-plate grant.

Text.

1. Svasti Puṅgalāyāḥ Devaguru-pad-ānu-dhyāto Kumārāmātya Mahārāja Nandanaḥ Kuṣalī

2. Mallayaṣṭikāyaṁ Brāhmanādīn yathāprativāsino mānayati viditam-vo bhaviṣyati

3. Yathā may-aiṣa grāmaḥ Asmai Gārgya sagottrāya Vājasaneya Sabrahmacārine Brāhmaṇa

4. Ravisvāmine mātā-pittror-atmānaś-ca Dharmm-opacayārtham-ācandrarkka-samakālikaḥ puttra pauttrā

5. di bhogyaḥ Bhūmicchidranyāyen-agrahāratven-ātiṣṛṣṭas-tan-na-kenacid-asmad-vanśajen-ānye

6. -na vā svadharma-yaśorthinā ākṣepaḥ piḍā[1] vā karthavyā uktaṁ ca ṣastiṁ varṣa sahasrāṇi

7. Svargge modati bhūmidaḥ ācchettā c-ānumantā ca, tāny-eva narake vased-iti

8. Svamukhājñā Samvat 200, 32 mārgga di 20 śūdrakarād-rakṣuṇaḥ.[2]

TRANSLATION.

Hail! The Kumārāmātya (*and*) Mahārāja Nandana, who meditated on the feet of Devaguru, being in good health from Puṅgalā honours, the Brāhmaṇas and others in Mallayaṣṭikā as well as the neighbours. It will be known to you that this village has been given by me to Ravisvāmi, a Brāhmaṇa of the Gārgya *gottra* (*and*) a student of the White Yajur-veda, for the increase of the merit of mother and father and myself, to be enjoyed by the sons and grandsons as long as the Sun and Moon will last, as an *agrahāra* (*a village all the inhabitants of which are Brāhmaṇas*). Therefore, no one either belonging to my family or others (who are) anxious to secure fame and religious matter, should dispossess or oppress (them). It is said that donors of lands lead a blissful life in heaven for sixty thousand years, and those who dispossess or approve such dispossession live in hell for as many years. A direct oral command in the year 232, the 20th day of Margga, to be protected from the hands of the Śudras.

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[1] Read *Pīḍā*. [2] Read *Rakṣaṇaḥ*.

MAY 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 5th May, 1909, at 9-15 P.M.

MAHAMAHOPADHYAYA HARAPRASAD SHASTRI, M.A., Vice-President, in the chair.

The following members were present :—

Dr. N. Annandale, Babu Rakhal Das Banerji, Mr. I. H. Burkill, Mr. L. L. Fermor, Babu Matilal Ganguli, Mr. H. G. Graves, Mr. N. L. Hallward, Mr. H. H. Hayden, Dr. W. C. Hossack, Mr. C. H. Kesteven, Rev. W. R. LeQuesne, Dr. Indumadhab Mallick, Lieut.-Colonel F. P. Maynard, I.M.S., Rev. A. C. Ridsdale, Pandit Yogesa Chandra Sastri—Samkhyaratna-Vedatirtha, Dr. Satis Chandra Vidyabhusana.

Visitors :—Miss E. Hadenfeldt, Miss G. Hadenfeldt, Dr. J. Travis Jenkins, Mr. H. E. Smith.

The minutes of the last meeting were read and confirmed.

Thirty-six presentations were announced.

The General Secretary reported that Major C. R. Stevens, I.M.S., and R. R. Simpson had expressed a wish to withdraw from the Society.

The Chairman announced that the Council has appointed the Hon. Mr. Justice Asutosh Mukhopadhyaya to officiate as Treasurer in the place of Mr. D. Hooper, gone home.

The following five gentlemen were balloted for as Ordinary Members :—

Mr. Henry M. Hance, proposed by Mr. H. G. Graves, seconded by Mr. L. L. Fermor; *Mr. V. Venkayya*, proposed by Mahamahopadhyaya Haraprasad Shastri, seconded by Babu Rakhal Das Banerji; *Dr. T. Horovitz*, Prof. of Arabic, M. A. O. College, Aligarh, proposed by Dr. T. Bloch, seconded by Mr. Harinath De; *Mr. A. Asghar*, Bar.-at-Law, High Court, Calcutta, proposed by Mr. Harinath De, seconded by Dr. A. Suhrawardy; *Maulana Abul-Kalam Azad*, proposed by Mr. Harinath De, seconded by Dr. A. Suhrawardy.

The following papers were read :—

1. *The Recovery of a lost Epic by Asvaghosa.—By* MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

2. *Why, how, and when did the Palas come to power in Eastern India?—By* MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

3. *The Waqf of Movables.—By* Dr. Abdullah al-Mamun Suhrawardy, M.A., *Barrister-at-Law.*

These papers will be published in a subsequent number of the *Journal*.

4. *On a Geniomya from the Cretaceous Rocks of Southern India.—By* H. C. Das-Gupta. *Communicated by* Mr. E. Vredenburg.

This paper has been published in the *Journal* for February, 1909.

5. *On Coptis.—By* I. H. Burkill.

This paper has been published in the *Journal* for March, 1909.

6. *Morphological and Physiological Differences between Marsilia left on dry land and that growing in water.—By* Nibaran Chandra Bhattacharjee. *Communicated by* Dr P. C. Ray.

For some time past I have been in search of a familiar plant which might be used in teaching as an Indian type of amphibious plant. At last in December 1907 I came across a big old and shallow tank in the midst of a solitary maidan in the Kalna subdivision of the district of Burdwan. Here I found a large number of aquatic plants in their natural condition, undisturbed by the interference of man, amongst which was the familiar susuni sāk, *Marsilia quadrifolia* (which is so largely used as a pot-herb—and whose soporific properties are so well known, that people suffering from insomnia take a quantity of the boiled sāk and its decoction, made tasty with a pinch of salt and a little mustard oil). This plant evidently might be taken as an Indian type of amphibious plant.

In the rainy season the tank was full of water; but with the advent of winter the water gradually sank to a very low level, leaving a number of plants, stranded on different kinds of soil. In some parts it became perfectly dry; there the Marsilia plants were on their way to death: other plants were in moist soil, others in soft muddy soil, and a number in water also; this circumstance afforded excellent facilities for observing the effect of desiccation.

The Marsilia plants, which remained in water, possessed all the characteristics of a typical aquatic plant, the stem being spongy, light and green, and the leaves tolerably large with entire margins.

The plants which had come to be on dry land were much reduced in size. The stem was solid, stiff, and covered with black cuticle. The leaves were much smaller, darker, and had their margins crenated.

But the most interesting point I noted in this case, and which was further corroborated by several other observations

later on, is that *Marsilia quadrifolia* so long as it remains in water never reproduces itself by means of spores, but by means of simple vegetative reproduction—any branch separated from the main plant, and suitably circumstanced, being capable of producing a new plant.

Spore-bearing capsules could be found plentifully in plants that were left on land, while they were conspicuously absent from any of the numerous plants that still remained in water. The necessity in this case is quite obvious. Ordinary vegetative reproduction is impossible in such dry situation. Even the main plant can not survive the desiccating influence of summer, which had already begun to tell heavily upon it. And if the plant is to preserve its race under such an adverse condition, it must produce some sort of reproductive organ which can withstand the destructive influence of summer, and can germinate when the conditions are favourable. In the case of Marsilia placed in land, such reproductive organs are produced in the shape of spores. The spores are covered by hard thick cuticularised walls and the capsules which contain the spores also possess extremely thick hard and cuticularised walls. These all tend to protect the inner resting protoplasm of the spore.

In lower thallophyta, we find similar instances, where necessity obliges the plant to produce similar resting spores. Indeed it is recorded that other species of Marsilia, *e.g.*, *M. vestita*, only produce spores when the waters have fallen and left them dry.

7. *Notes on the History of the District of Hughli before the Mahomedan Period.*—*By* NUNDO LAL DEY.

8. *The drug Astukhudus, nowadays* Lavandula dentata, *and not* Lavandula Stœchas.—*By* I. H. BURKILL.

This paper has been published in the *Journal* for March, 1909.

9. *The Manikyala Tope.*—*By* H. BEVERIDGE.

10. *First notes on* Cymbopogon Martini, *Stapf.*—*By* I. H. BURKILL.

This paper has been published in the *Journal* for March, 1909.

11. *Discovery of seven New-dated Records of the Scythian Period.*—*By* RAKHAL DAS BANERJI.

This paper will be published in a subsequent number of the *Journal*.

12. *Mallayaṣṭika Grant of Nandana.*—*By* PARMESWAR DAYAL. *Communicated by* MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's Rooms on Wednesday, May 12th, 1909, at 9-15 P.M.

LIEUT.-COLONEL A. H. NOTT, I.M.S., in the Chair.

The following members were present :—

Dr. G. C. Chatterjee, Captain F. P. Connor, I.M.S., Lieut.-Colonel F. J. Drury, I.M.S., Dr. H. Finck, Lieut.-Colonel C. R. M. Green, I.M.S., Lieut.-Colonel G. F. A. Harris, I.M.S., Dr. W. C. Hossack, Dr. A. M. Leake, Dr. Indumadhab Mallick, Lieut.-Colonel F. P. Maynard, I.M.S., Dr. Girindranath Mukerjee, Major F. O'Kinealy, I.M.S., Dr. T. F. Pearse, Major J. C. Vaughan, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitor :—Major W. D. Sutherland, I.M.S.

The minutes of the last meeting were read and confirmed.

A case of peculiar thickening of the bones of the extremities in a Bengali woman was shown with X ray photographs by Captain Connor, I.M.S.

Cases of Sarcoma and of Epithaliana of the right upper jaw were shown by Major O'Kinealy, I.M.S.

The following paper was read :—

On Plague, by DR. W. C. HOSSACK. Lieut.-Colonels Harris, and Green, Majors Sutherland, Vaughan, and Rogers and Dr. Pearse spoke, and Dr. Hossack replied.

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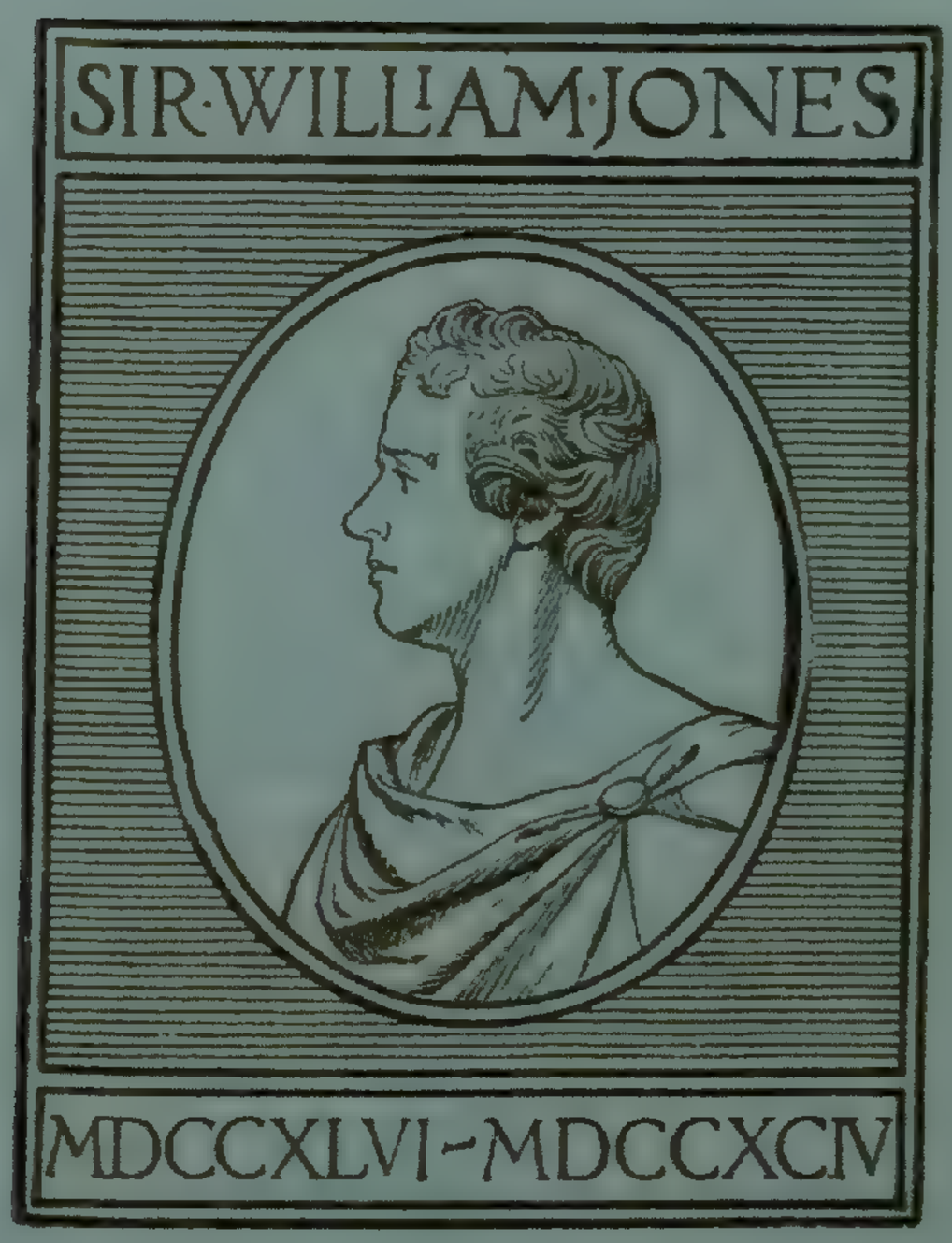

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17. The Recovery of a Lost Epic by Aśvaghoṣa.

By Mahāmahopādhyāya Haraprasad Shāstrī.

In the last annual address a regret has been expressed that no startling discoveries have been made in philology and kindred subjects in recent years. Startling or not startling, I am going to announce to-night a very interesting discovery of a manuscript. It is the discovery of a new ancient epic poem by no less a person than the great poet, musician, and philosopher of the first century of the Christian era—by Aśvaghoṣa, the spiritual preceptor of the greatest Indo-Scythian monarch, Kaniska, who held nearly a third of Asia under his sway, who is credited with having established the Śaka era with giving a new life to a higher form of Buddhism, and in whose court flourished some of the most brilliant men both in science and literature.

Aśvaghoṣa is the first great writer of the Mahāyāna school of Buddhism, and author of the first artistic epic in Sanskrit, the Buddha-carita. It was not known whether he had written any other great work in poetry, though some beautiful songs are attributed to him by the Chinese and the Tibetans. But the new poem which I am laying on the table of the Society is quite unknown. It is by Aśvāghoṣa. The style is the same as that of Buddha-carita; the sentiments the same; the religious teaching the same, the boldness in deviating from the rules of Pāṇini the same, the versification and the language also the same. It is in fact a twin brother of Buddha-carita. Buddha-carita has been translated into Chinese and Tibetan. I have gone through the catalogue of Chinese Tripitaka and of the Tangur as far as available, but the name of this new poem does not occur in them. It is called Saundarānanda Kāvya. In the first chapters it deals of the great love which Nanda, a brother of Buddha, bore for his wife Sundarī. Then it describes how Buddha took Nanda to his hermitage and made him a mendicant. Nanda was anxious to return to the world and to his wife, but Buddha always persuaded him to persist in his mendicant life. Now this spiritual struggle between Buddha and his royal disciple forms the central point of interest of this fascinating epic. During the course of this struggle Buddha takes his disciple to heaven, shows that even heaven should not be worthy of one's desire, and ends the work by giving him a taste of Amṛta or the nectar of Nirvāṇa. The first chapter contains a description of Kapilavāstu as a great hermitage.

In the last colophon, Aśvaghoṣa, the author, is described as a Bhadanta, as a Sāketaka, meaning born in Saketa or Ayodhyā, and as Subarṇākṣputra. The same colophon, we find, is given in the Tibetan version of Aśvaghoṣa's Buddha-carita (see Thomas's paper on Matriceṭa and Mahārājakaṇikalehha).

So far there is very little to doubt with regard to the authorship of these two works. A complete work of Buddha-carita in original Sanskrit has not yet been obtained anywhere, and I at first thought that Saundarānanda was only another name for the lost portion of the Buddha-carita. But a comparison of Beal's translation of the Chinese version of Buddha-carita and of this book has completely dispelled my doubts. The lost portion of the Buddha-carita contains fourteen chapters, but this is complete in eighteen cantos, and the subject of the lost chapters has no connection with the new poem.

In my first Nepal catalogue Saundarānda Kāvya is mentioned in page 74. In 1907 I asked for this work and a palm-leaf manuscript was placed before me, the leaves of which were worn out into the form of a bow. The first line is complete. Several letters of the second have disappeared in the centre, many more of the third and subsequent lines. I expressed my disappointment with the book, when the librarian Subbā, Viṣṇuprasāda, Rājabhāṇḍāri, our associate member, very courteously placed a paper manuscript before me which I immediately handed over to the scribe Kuveraratna Vajrācārya for copying. This Kuveraratna is a remarkable man. In 1897 he saw Bühler's Charts of Indian alphabets in my hand and immediately set to work to copy it. From that copy he has in the last eleven years mastered various alphabets, ancient and modern, and can now copy all sorts of manuscripts with fair accuracy. But his great difficulty is that he knows nothing of Sanskrit, so it requires a great deal of labour to decipher his transcriptions of manuscripts.

I have made a transcript of the whole of the manuscript.

18. Guhilots.

By D. R. Bhandarkar, M.A., *Poona*.

Those who have read Tod's "Annals and Antiquities of Râjasthan" need not be told in what high estimation the royal dynasty of Mewâr is held throughout Râjputânâ. "By universal consent as well as by the gotra of this race," says he, "its princes are admitted to be the direct descendants of Rama, of the solar line."[1] "These are styled Ranas, and are the elder branch of the Suryavansi, or 'children of the sun.' Another patronymic is Raghuvansi, derived from a predecessor of Rama, the focal point of each scion of the solar race. To him, the conqueror of Lanka, the genealogists endeavour to trace the solar lines. The titles of many of these claimants are disputed; but the Hindu tribes yield unanimous suffrage to the prince of Mewar as the legitimate heir to the throne of Rama, and style him *Hindua Sooraj*, or 'Sun of the Hindus.'"[2] This explains the pride of the Râṇâ of Mewâr calling himself "a descendant of a hundred kings," to which Tod constantly refers in his book. The Râṇâ again "is universally allowed to be the first of the 'thirty-six royal tribes,' nor has a doubt ever been raised respecting his purity of descent."

Praise of this dynasty cannot further go, but Tod has only stated the belief still current in Râjputânâ. The history of Mewâr, ancient and modern, has been elaborately set forth by him, and, considering the materials then accessible to him, no historian has discharged his duties more faithfully. But quite a number of inscriptions have been found since the time of Tod, which necessitate some alterations in his views. And I propose in two papers to deal with certain points connected with this dynasty, on which the inscriptions have shed a new light. In this paper I shall confine myself to the subject of the origin of this family, and in the second shall attempt to give in brief the ancient history of the dynasty to be deduced mainly from inscriptions.

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[1] Vol. i, p. 78; all references to this work in this paper are made from the edition published by S. K. Lahiri & Co., Calcutta, 1894.

[2] Ibid., p. 197.

The generic name of the tribe to which the dynasty belongs is Guhilot or Gehlot. It is a corruption of the Sanskrit word Guhila-putra, which is met with in inscriptions. To cite an instance, an inscription dated Saṁvat 1335 and originally found at Chitorgadh but now lying at the Victoria Hall, Udaipur, has the following:—*Śrî-Ekaliṁga-Har-ârâdhana-Pâśupat-âchârya-Hârîtarâśi - kshatriya - Guhilaputra -[Siṁha] - labdha - mahodayâ.*[1] Here Simha, one of the early kings of the Mewâr dynasty, is called Guhilaputra, *i.e.*, Guhilot. The Bherâ-Ghâṭ inscription of Âlhaṇadevî dated K.E. 907, however, gives the variant Gobhila-putra in the verse *asti prasiddham-iha Gobhilaputra-gotran-tatr-âjanishṭa nṛipatiḥ kila Haṁsapâlaḥ.*[2] Here Haṁsapâla, one of the names occurring in the dynastic list of Mewâr, is spoken of as belonging to the family of Gobhilaputra, *i.e.*, Guhilot. A Hânsî inscription dated V.E. 1224 has the Prakrit form Gûhilota instead of the Sanskrit expression Guhilaputra or Gobhilaputra. Thus Kilhaṇa, the maternal uncle of the Châhamâna Pṛithvîrâja, who had been appointed keeper of Âsikâdurga, *i.e.*, the Hânsî fort, is therein represented to have pertained to the *Gûhilot-ânvaya*,[3] *i.e.*, the Guhilot family. Whether we take the Prakrit or the Sanskrit form, the dynasty is named after Guhila. This mode of calling a family after the name of an individual is too common in Râjputânâ to require any mention of instances, and is not unknown even in Great Britain as is evidenced by such names as Robertson, Stevenson and so forth, where the ending *son* exactly corresponds to *putra* of Guhilaputra.[4] But *putra* was not the only way of expressing a descent from a common ancestor; the rules of *taddhita* were also resorted to. Thus the dynasty is called not only Guhilaputra (Guhila-son) but also Gauhilya (of, *i.e.*, sprung from, Guhila), from which another tribal name, *viz.* Göil or Goyal, is derived. The name Gauhilya occurs, *e.g.*, in a Chitorgadh inscription of V.E. 1331 in the line *Yasmâd-dadhau Guhila-varṇanayâ prasiddhâṁ Gauhilya-vaṁśa-bhava-râja-gaṇô-tra jâtiṁ.*[5] This whole verse is quoted also in the *praśasti* of the temple of Mâmâdeva at Kumalgadh.[6]

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[1] Above vol lv, pt. i, p. 48.

[2] *Ep. Ind.*, vol. ii, pp. 11-12.

[3] The original stone is at present lying in the Royal Scottish Museum, Edinburgh. I quoted the above from a nice photo of it, supplied to me. But a summary and a translation of it, perfunctorily done, have already appeared in *As. Res.*, vol. xv, pp. 443–6, and *Transactions Roy. As. Soc.*, vol. i, p. 154.

[4] The *khâṁps* or septs of all the well-known Râjpût families are so formed. To cite a few instances, of the Râṭhods some clans are Jetmâlot, Bhârmalot, Ridmalot, and so forth; of the Râṇâvats (Sîsodiyas), are Bhûcharots, Sârangdevots, Gajsiṁhots and so on; of the Chohâns are Bâlots, &c. The ending *ot* of all the e names is the corruption of the Sanskrit *putra.*

[5] *Bhavnagar Pr. and Sk. Inscrs.*, p. 75.

[6] This inscription is descriptive of the Guhilot family, and was caused

A corrupt form of Gauhilya is Gohilla, which is given by a Mahuvâ inscription of V.E. 1500.[1] Therein the king Sâraṁga, who is called a Gohilla, is mentioned as reigning there on the aforesaid date. Other expressions descriptive of the family are *Guhila-vaṁśa* or *Gûhilânvaya*, which must be translated by "the lineage or family of Guhila or Gûhila," and not by "the family (named) Guhila." This is clear from the line *vaṁśas = tad-viparîta esha Guhilasy = ôddhârabhûto bhuvaḥ*, occurring in the Châṭsû inscription of Bâlâditya. There is, however, an inscription found at Mângroḷ and dated V.E. 1202, which speaks of the family as *Gûhilâkhyânvaya*.[2] This calls the dynasty by the actual name of the founder himself, *viz.*, Gûhila.

Of the origin of the Guhilots, two accounts have been given by Tod, one traditional and the other Muhammadan. The first deduces the pedigree from Sumitra, the last of the solar race, and connects the dynasty with the last Valabhi prince, S'îlâditya. This has been ably set forth in the first two chapters of the "Annals of Mewar," to which the reader is referred. The second, *i.e.*, the Muhammadan, account suggests a connection between the family and the Sassanian kings. One Muhammadan author, whom Tod quotes, says: "This race is either of the seed of Noshizad, the son of Noshirwan, or of that of the daughter of Yezdegird."[3] This subject has been discussed by him in Chapter III. But no authority for this is forthcoming earlier than that of Abul Fazil, and it is by no means clear on what the evidence for this assertion is based. Let us, however, see what the inscriptions of Mewâr teach us. Their importance cannot be overrated, for they furnish the earliest evidence on this matter, and are the genuine records of the family itself.

A stone inscription lying in a *maṭha* near the temple of Achaleśvara on Mount Âbû, dated V.E. 1342, and referring itself to the reign of Samarasiṁha, has the following verse, descriptive of Bappa, one of the very early kings of the family.

हारीतात्किल वप्पकोंऽ्रि(घ्रि)वलयव्याजेन लेभे महः

क्षात्रं धाम निभादितीर्य मुनये ब्राह्मं स सेवाफलात् ।

एतेद्यापि महीभुजः क्षितितले तदंशसंभूतयः

शोभन्ते सुतरामुपात्तवपुषः क्षात्रा हि धर्मा इव ॥[4]

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to be engraved by Kumbha. All the slabs that could be traced have now been removed to Udaipur, and placed in the Victoria Hall.

[1] *Bhavnagar Pr. and Sk. Inscrs.*, p. 163.

[2] *Ibid.*, p. 158.

[3] *Annals and Antiquities of Rajasthan*, vol. i, p. 221.

[4] *Ind. Ant.*, vol. xvi, pp. 347-8; above vol. lv, pt. i, pp. 49 and 34; *Bhavnagar Pr. and Sk. Inscrs.*, pp. 85 and 89.

TRANSLATION.

From Hârîta, resembling the Creator, Bappaka, so the tale goes, obtained regal splendour in the guise of an anklet,[1] after he had bestowed on the sage priestly (*splendour*) under the guise of his devotion. Even now these princes here, who are born in his race, are shining intensely on the surface of the earth, verily, like the regal duties in bodily form.

As Bappaka or Bâpâ is here represented to have exchanged his priestly splendour (*brâhmya*) for regal lustre (*kshâtraṁ mahaḥ*) with his preceptor Hârîtarâśi, it will be seen that the stanza evidently intends making us understand that Bâpâ was a Brâhmaṇa and Hârîtarâśi a Kshatriya. The same thing is specified in another verse but occurring in the Chitorgaḍh inscription of V.E. 1331 above alluded to. The same verse is repeated in the Mâmâdeva *praśasti*. It is as follows :—

जीयादानंदपूर्वं तदिह पुरमिलाखंडसौंदर्यशोभि
च्छोणीप्र(ए)ष्ठस्थमेव त्रिदशपुरमधःकुर्व्वदुच्चैः समृद्ध्या ॥
यस्मादागत्य विप्रश्चतुरुदधिमही(।)वेदिनिक्षिप्तयूपो
बप्पाख्यो वीतरागश्चरणयुगमुपास्ते(सिष्ट) हारीतराज्ञेः ।[2]

TRANSLATION.

May Ânaṁdapura be victorious, which shines with the beauty of a portion of the earth, and which has, even while on the surface of the earth, humbled the city of the gods by its great prosperity ; coming from which, the Brâhmaṇa Bappa, who was free from worldly attachment and had established the sacrificial post on the altar, *viz.*, the earth (surrounded) by the four oceans, worshipped the pair of the lotus-like feet of Hârîtarâśi.

Here the points worthy of note are first that Bappa is distinctly called a Brâhmaṇa (*vipra*), and secondly, that he is said to have come from Ânandapura. Now, as regards the identification of Ânandapura, I have said the following in my paper on the "Gûrjaras" : "Ânandapura is mentioned in the Alînâ grant of Śîlâditya VII, which has been identified by Dr. Fleet with Ânand, the chief town of the Ânand tâluka, about twenty-one miles south-east of Kaira (*Gupta Incrs.*, p. 173). The name also occurs in the Sarsavṇî plates of the Kaṭachchuri prince, Buddharâja, in his paper on which Dr. Kielhorn inclines to Dr. Fleet's view with regard to this identification (*Ep. Ind.*, vi,

[1] For the legend, see *Bhavnagar Pr. and Sk. Inscrs.*, p. 89, note †.
[2] Ibid., p. 75.

279). But, in my humble opinion, this identification is far from satisfactory. It is not established by means of the identification of any surrounding villages ; nor by the mention of this name in any one of the inscriptions in or about Ânand. It is only the correspondence of sound that is in favour of this view. On the other hand, the identification of Ânandapura with Vaḍnagar is based, in my humble opinion, on irrefragable evidence. The Vaḍnagar *praśasti* of the reign of Kumârapâla distinctly makes mention of the town by the name of Ânandapura and speaks of it as containing a settlement of Brâhmaṇas called Nagara (*Ep. Ind.*, i, pp. 295, 299 and 303). This is quite in keeping with the tradition current among Nâgar Brâhmaṇas that their original seat was Vaḍnagar (*Gujarât Population* in the *Gazetteer of the Bombay Presidency*, vol. ix, pt. i, p. 13). Again, the Alînâ charters of A.D. 649 and 656 were issued to the same grantee who is described in the first as originally of Ânarttapura and in the second as originally of Ânandapura (*Ind. Ant.*, vii, 75 and 79). This means that Ânandapura was also known by the name of Ânarttapura. And, as a matter of fact, according to popular stories, Vaḍnagar was called Ânarttapura in the Tretâyuga (*History of Gujarât* in the *Gazetteer of the Bombay Presidency*, vol. i, p. 6)." From this it will be seen that when Bappa, the supposed founder of the Guhilot dynasty, is, in the Chitorgaḍh inscription, called a Brâhmaṇa and spoken of as having come from Ânandapura, what is implied is that he was a Nâgar Brâhmaṇa. If anybody is still sceptic about this conclusion, his doubt is completely set at rest by the following extract from the *Ekaliṅga-mâhâtmya* composed during the reign of Râṇâ Kumbha, for which I am indebted to the kindness of Pandit Gaurishankar Ojha :—

जयति जगति विख्यातं सकलमहौलोकपावनं सुमहत् ।
श्रीएकलिङ्गदैवत [1] गोत्रं वैजवापाङ्गम् [2] ॥ १
जयति तथानन्दपुरे नागरकुलमण्डनो महोदेवः ।
यजनादिकर्मकुशलो विजयादित्याभिधो विप्रः ॥
तत्तनयो द्विजवर्यः केशवनामा बभूव लोकेऽस्मिन् ।
श्रुतयो यत्र चतस्रः षडङ्गसहिता भान्ति ॥ २
तस्य सुतो जगतीतलमखिलं तपसा सुखास्पदं कुर्वन् ।
नागराजलनामा बभूव पात्रं स्मृतीनां यः ॥ ३

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1 Read देवतं ; but this will not suit the metre.
2 Read श्रीवैजवापाङ्गम् .

तत्पुत्रो जगति भोगाराउलसंज्ञो धराधिपैर्वन्द्यः ।
आसाधरोस्य सूनुः श्रीदेवाङ्कस्य तनुजन्मा ॥ ५
तत्तनुजः सर्वज्ञो दक्षाध्वरकृद्विभूतिभृद्विमलः ।
स महादेवो भगवानभिधानेनाभिधेयेन ॥ ६
तस्य कुलालङ्करणं गुहदत्तोऽन्वर्थनामधेयोऽभूत् ।
अद्यापि यस्य नाम्ना वंशोऽयं ख्यातिमाञ्जगति ॥ ७
यदुक्तं पुरातनैः कविभिः ।
आनन्दपुरसमागतविप्रकुलानन्दनो महीदेवः ।
जयति श्रीगुहदत्तः प्रभवः श्रीगुहिलवंशस्य ॥ [1]

TRANSLATION.

(*v.* 1) Triumphant are the god Śrî-Ekaliṅga and the family (*gotra*) called Vaijavâpa, (both) famous in the world, purifying the people on the whole of the earth and of much greatness.

(*v.* 2) Similarly triumphant is the Brâhmaṇa named Vijayâditya, the ornament of the Nâgara family in Ânandapura, a god on earth, and proficient in sacrificial and other rites.

(*v.* 3) His son in this world was the best of the Brâhmaṇas Keśava by name, in whom the four sacred scriptures shone together with their six divisions.

(*v.* 4) His son was Nâgâ Râula by name, who, by his religious austerities, made the whole world happy, and was an object cf admiration to the *Smṛitis*.

(*v.* 5) His son was of the name of Bhogâ Râula, who was adorable in (this) world to the kings; his son was Âsâdhara, and his son was Śrî-Dêva.

(*v.* 6) His son was Mahâdeva, who was the divine (Mahâdeva) not only in name but in reality, being of universal information (*sarvajña*) just as the other was omniscient (*sarvajña*), being the performer of excellent sacrifices (*daksh-âdhvara-kṛit*) just as the other was the destroyer of the sacrifice of Daksha (*Daksh-âdhvara-kṛit*), being prosperous (*vibhûti-bhṛit*) just as the other was smeared with ashes (*vibhûti-bhṛit*), and being pure (*vimala*) just as the other was.

(*v.* 7) The ornament of his family was Guhadatta, whose name was appropriate (in this respect) [2] and by whose name this race is still known in the world.

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[1] This verse is quoted in the *Bhavnagar Pr. and Sk. Inscrs.*, p. 89, note †.

[2] Because Guha is another name for Kârtikeya, son of Mahâdeva. Thus both are Guhas and sons of Mahâdeva.

As said by the ancient poets[1]:

(*v.* 8) Triumphant is the Brâhmaṇa Śrî-Guhadatta, who was (the cause of) delight to the Brâhmaṇa family come from Ânandapura, and who was the founder of the illustrious Guhila race.

Now, what do we gather from this passage? In the first place, verse 8, which is very important, tells us that the founder of the Guhila race, *i.e.*, the Guhilots, was Guhadatta, that he was a Brâhmaṇa (*mahīdeva*) and that he belonged to a Brâhmaṇa family that had emigrated from Ânandapura. And, as if to leave no doubt as to the correct identification of Ânandapura with Vaḍnagar and thereby as to the exact caste name of his family, we are distinctly told in verse 2 that Vijayâditya, the ancestor of Guhadatta, was the ornament of the Nâgara race. No doubt can, therefore, be possibly entertained as to Guhadatta, the originator of the Guhilots, having pertained to a Nâgara Brâhmaṇa family. Verses 3—6 set forth his pedigree from Vijayâditya onwards, which for our present purpose is not of much importance. Verse 1, however, states an important fact, when it tells us that the *gotra* of the family was Vaijavâpa.

The same information is contained in a verse at the beginning of the *Rasika-priyâ*, a commentary by Râṇâ Kumbha on Jayadeva's *Gîta-Govinda-kâvyaṁ*. It runs thus :—

श्रीबैजवापेन सगोत्रवर्यः श्रीबप्पनामा द्विजपुङ्गवोऽभूत् ।
हरप्रसादादपसादराज्यप्राज्योपभोगाय नृपोऽभवद्यः ॥ ५ ॥

This verse also speaks of Bappa as a Brâhmaṇa and as belonging to the Baijavâpa *gotra*. But further details regarding this point are furnished in a stanza, which is often repeated by the Brâhmaṇas of Mewâr, when asked to give a succinct description of the Râṇâ's family. The Brâhmanas of Mewâr, not being learned, recite the stanza frightfully badly, but the correct text of it, so far as it goes, has been supplied to me by Pandit Gaurishankarji. It runs as follows :—

देवः श्रीएकलिङ्गो हरितऋषिगुरुर्वाणमाता कुलाम्बा
पर्वाणि त्रीणि सूत्रे यजुरिति निगमो वैजवापाङ्कगोत्रम् ।
बप्पो मूलं नरेशो द्विजसुरभिदया मेदपाटेश्वरत्वं
चित्रोद्रिर्मूलभूमिर्दशभिरिति गुणैर्भाति श्रीशोदवंशः ॥

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[1] It is worthy of note that wherever this expression occurs in the *Ekaliṅga-mâhâtmya* of Râṇâ Kumbha, there some quotation is made from some earlier record. In the present case, v. 8 seems to have been cited from the Āṭpur inscription of Śaktikumâra, as will be seen further in the sequel.

Translation.

Śrî-Ekaliṅga [1] is the deity (worshipped) [2]; the sage Harita (*i.e.*, Hârîtarâśi) [3] is the preceptor; Bâṇa *mâtâ* [4] is the family goddess; three knots for the sacred thread; Yajus is the Veda; Vaijavâpa is the *gotra;* king Bappa is the progenitor; compassion is for Brâhmaṇas and cows; sovereignty is over Medapâta (Mewâr); the mountain Chitra (*i.e.*, Chitrakûṭa = Chitorgaḍh) is the native place: with these ten qualities shines the Śiśoda dynasty.

What is germane to our topic in the present stanza is the second line, which informs us that the *gôtra* of the Śîśoda, *i.e.*, Râṇâ's, family is Vaijavâpa, the Veda is Yajus and the knots in the sacred thread are three. As the number of the knots corresponds to the number of the *pravaras* in the *gôtra*, what is meant to convey is that the Vaijavâpa *gôtra* has three *pravaras*. The *Ekaliṅga-mâhâtmya*, as we have seen above, tells us that the *gôtra* of Guhadatta, founder of the Guhila-vaṁśa, was Vaijavâpa, but gives no further details. The stanza, however, just cited, gives us the additional information that the Veda of the family is the Yajurveda and that it has three *pravaras*. Now, a work entitled *Gôtra-pravara-nibandha-kadambam*, which gives an account of *gôtras* and *pravaras*, has the following :—

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[1] The temple of Ekaliṅga is 14 miles north of Udaipur. With regard to the origin of the name Ekaliṅga, Tod says as follows: "That is *with one* (*ek*) *liṅgam* or *phallus*—the symbol of worship being a single cylindrical or conical stone. There are others, termed *Sehesliṅga* and *Kotiswara*, with a thousand or a million of phallic representatives all minutely carved on the monolithic emblem...." (*Annals and Antiquities of Rajasthan*, vol. i, p. 481, note ‡). Tod's explanation may be correct and may be even that locally given. But the *Śabda-kalpadruma* gives the following account: **पञ्चक्रोशान्तरे यत्र न लिङ्गान्तरमीक्ष्यते। तदेकलिङ्गमाख्यातं तत्र सिद्धिरनुत्तमा॥** What the verse purports to say is that when, for the distance of ten miles, none but one *liṅga* is observable, the latter is called Ekaliṅga (one phallus).

[2] "The Ranas of Mewar, as the *dewans*, or vicegerents of Siva, when they visit the temple, supersede the high priest in his duties, and perform the ceremonies, which the reigning prince does with peculiar correctness and grace."—*Annals and Antiquities of Rajasthan*, vol. i, p. 484.

[3] *Ibid.*, p. 210 ff. I shall have to speak in detail in my second paper about the sect he founded.

[4] *Ibid.*, p. 225, where Tod says: "With his bride he conveyed to Cheetore the statue of Vyan-mata, the tutelary goddess of her race, who still divides with Ekalinga the devotion of the Gehlote princes. The temple in which he enshrined this islandic goddess yet stands on the summit of Cheetore, with many other monuments assigned by tradition to Bappa." Pandit Gaurishankarji informs me that one golden image (small) is worshipped at Udaipur, and there is another temple of Bâṇamâtâ at Kailwâḍā near Kumalgaḍh.

अथ कात्यायनलौगाक्ष्युक्तमत्रिगोत्रकाण्डमुदाहरिष्यामः.....

.....दत्तव्यालिखदार्णंकुद्दालवना अर्णनाभिवैवेय **वैज-वापि**श्रिमिश्चमौञ्जकेशो गविष्ठिरा इत्येते दश गविष्ठिराः। एतेषाम-विवाहः। तेषां ऋार्षेयः प्रवरो भवति **आत्रेयगाविष्ठिरपौर्वातिथे**ति ऋत्रिवद्गविष्ठिरवत्पूर्वातिथिवत्।[1]

The words in large type are important. The first is Vaijavâpi mentioned in a list of *gótras*, and there can hardly be a doubt that it corresponds to Vaijavâpa. The other words in large type are the names of the three *pravaras* pertaining to it, *viz.*, Âtreya, Gâvishṭhira and Paurvâtitha. Again, as will be seen from the words at the outset, the list of *gotras* and *pravaras* here submitted is said to have been that enumerated by Kâtyâyana and Laugâkshi, who, it is worthy of note, are the reputed authors of the *sûtras* connected with the two well-known divisions of the Yajurveda,—the Black and the White. We thus find that the details about the *gôtra* and *pravaras* of the Râṇâ of Udaipur specified in the stanza quoted above receives corroboration from the statements of the *sûtrakâras* Kâtyâyana and Laugâkshi. That Vaijavâpa was one of the *gôtras* amongst the Nâgars as early as the 13th century can be proved by epigraphic evidence also. This is supplied by the *praśastis* of Nânâka found at Kodinâra in the Amrelî division of the Baroda State in Kâthiâwâr and published by H. H. Dhruva. Verses 7 and 8 from the first of these deserve notice and are as follow :—

चेताध्मपवित्रितोम्बरचरं स्वाध्यायघोषोत्तरं
स्थानं तीर्थमनोहरं नगरमित्यास्ते किलानश्वरं
आर्योपासनया वृषप्रियतया यच्च द्विजेन्द्रश्रिया
व्यक्तं वक्ति फणीन्द्रभूषणभृतो देवस्य संस्थापनं ॥ ७
गुह्या नाम ग्रामस्तदन्तिके बैजवापगोत्राणां
श्रीकरणव्यापाराप्रौथितचौलुक्यनृपदत्तः ॥ [2]

TRANSLATION.

(*v.* 7) "There is an imperishable place, engaging (*the mind of the people*) because it is a Tîrtha, called Nagara, resonant with the voices of men reciting the Vêdas, under a sky sanctified with the smoke of the three sacrificial fires, which clearly proclaims itself as the abode of the God,—who has for his ornaments the lords of serpents (*Śiva*),—by the adoration (*upâsanâ*)

[1] *Mysore Govt. Or. Lib. Series—Bibliotheca Sanskrita*, No. 25, p. 82.
[2] *Ind. Ant.*, vol. xi, p. 102; my attention to these verses was first drawn by Pandit Gaurishankar Ojha.

of Âryâ (*Ambikâ*) as well as by the assembling of Ârya's (*worthy people*),—by the love for Vṛisha (*the bull Nandî*), as well as by the love for Vṛisha (*Dharma*), (*and*) by the beauty of Dvijêndra, (*i.e., the moon that Śiva bears on his forehead*), as well as by the prosperity of the best of Dvijas, (*i.e., the Nâgara Brâhmaṇas, its inhabitants*)."

(*v.* 8) "Near it is a village by name Guñjâ, belonging to men of the Vaijavâpa family, given (to them) by the Chaulukya king, pleased with their work as Prime Ministers."

Here then we have a distinct mention of Vaijavâpa, the Brhâmaṇas belonging to which *gôtra*, we are told, resided in Guñjâ near Nagar, *i.e.*, Vaḍnagar. The village of Guñjâ is still in existence, and is about 4 miles south-west of Vaḍnagar. Guñjâ, being in the close vicinity of Vaḍnagar, is a sufficient indication that the Brâhmaṇas of the Vaijavâpa *gôtra* are Nâgar Brâhmaṇas. But from the *praśastis* themselves, it appears that Guñjâ was looked upon as a part of Ânandapura (Vaḍnagar) itself. For in verse 9 of the first *praśasti*, Someśvara, ancestor of Nânâka, is described as residing in Guñjâ, whereas, in verse 1 of the second, he is said to have lived in Ânandapura. The conclusion is irresistible that Guñjâ was supposed to be included in Ânandapura. There can, therefore, be no reasonable doubt that Vaijavâpas are meant to be Nâgar Brâhmaṇas. Though inscriptions attest the existence of Vaijavâpas in the 13th century, it will be an interesting inquiry to ascertain whether there is even now this *gôtra* amongst the present Nâgars and also as belonging to the Yajurveda. Mr. K. B. Divatia, Bar.-at-Law, Ahmedabad, however, informs me that the Nâgars have still amongst them a *gôtra* called Baijavâpas which undoubtedly corresponds to Vaijavâpa or Vaijavâpi, but that they are Ṛigvedîs. This last discrepancy is not of much consequence, for instances of one and the same *gotra* falling under more than one Vêda are not uncommon, as even a cursory inspection of the work *Gôtra-pravara-nibandha-kadambam* alluded to above will convince us. What is important is that the *gôtra* Vaijavâpa (Baijavâpas) is not unknown amongst Brâhmaṇas of the Nâgar caste.

Let us now see how early and how late the tradition about the Brâhmaṇa origin of the Râṇâ's family can be traced. At the outset of the discussion of this question, I have quoted two stanzas from two different inscriptions. The first is from a *maṭha* near the temple of Achaleśvara near Mount Âbû, and is dated V.E. 1342, (A.D. 1285), and the second is from Chitorgaḍh dated V.E. 1331 (A.D. 1274). A much earlier record than either of these is also forthcoming. If we look over the last verse in the extract from the *Ekaliṅga-mâhâtmya* cited above, it will be observed that it is preceded by the words *yad-uktaṁ purâtanaiḥ kavibhiiḥ*, *i.e.*, "as said by the ancient poets." This means that it is quoted from some early record. Now, if we turn to

the translation of 'the inscription from the ruins of Aitpoor,' as given by Tod on p. 756 of his *Annals and Antiquities of Rajasthan*, vol. i, we shall be convinced that it cannot but be the rendering of the verse just referred to. But this matter is placed beyond all doubt by a copy sent to me by Pandit Gaurishankar Ojha, of the transcript prepared by Jñânachandra Yati for Tod himself and now lying in the Jaina *bhaṇḍâr* of Mâṇḍal in the Udaipur State.[1] This inscription refers itself to the reign for Śaktikumâra, is dated V.E. 1034 (A.D. 977), and is thus nearly three hundred years anterior to the Chitorgaḍh epigraph. To nearly this period belongs another inscription,—that found at Châtsû in the Jaipur State. It is unfortunately not dated and belongs to the reign of Bâlâditya, a prince of a Guhilot dynasty different from that of Mewâr.[2] The second half of verse 7 therein describes his ancestor Bhartṛibhaṭṭa as follows:—

ब्रह्मक्षत्रान्वितोऽस्मिन्समभवदसमे रामतुल्यो विशल्यः
सौ(श्रौ)र्याढ्यो भर्टप(भ)ट्टो रिपुभटविटपिच्छेदकेलौपटीयान् ॥ ७

TRANSLATION.

"In this unequalled (family) there was Bhartṛibhaṭṭa, who, like Râma (*i.e.*, Paraśurâma), was possessed of (both) priestly and martial energy,[3] was free from turmoil, full of bravery and proficient in the sport of cutting off trees, *viz.*, the soldiers of (his) enemies."

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[1] Tod constantly speaks of his *yati* Gyânchand (Jñânachandra), whom he often consulted in epigraphic, ethnic, and other matters (*e.g.*, vol. i, p. 18), while writing his work "the Annals and Antiquities of Rajasthan." For a long time nobody knew anything about the *gachchha* and whereabouts of the Jati, and it is, indeed, to Pandit Gaurishankarji's zeal, as unflagging as disinterested, that we are indebted for information on these points. Gyânchand was originally a resident of Jaipur, and was a pupil of Amarchand of the Kharatara *gachchha*. At the request of Tod, to whom he was of great use, Râṇâ Bhîmsingh of Udaipur granted him a few *bighas* of land in the village of Mâṇḍal, about ten miles north-west of the Bhilwârâ railway station on the Ajmer-Khâṇḍwâ line. He was afterwards settled there. His pupil was Śivchand, and the pupil of the latter, Ganeśchand, is living at present. It was by a lucky accident that Pandit Gaurishankarji once met him in Udaipur and learnt who he was. The former visited his *bhaṇḍâr* at Mâṇḍal one day, and was able to trace the transcript of the Âṭpur inscription of Śaktikumâra, prepared by Gyânchand himself. Tod wrongly calls the place Aitpoor, which, he says, is an abbreviated form of Âdityapura (vol. i, p. 329, note *). The name is really Âṭpur or Âḍpur, and is the same as Âhaḍ (Âghâṭa), the ancient capital of Mewâr (*ibid.*, pp. 745-), now represented by the ruins near the present Udaipur station.

[2] According to Pandit Gaurishankar Ojha, this inscription is of about 1100 V.S. But I am inclined to think that it is at least one century earlier.

[3] What is also hinted here is that he was a Brahma-kshatrî. This point will be found developed further in the sequel.

What is worthy of note here is that Bhartribhaṭṭa, a Guhilot, is compared to Paraśurâma, and is spoken of as possessed of priestly (*brahma*) and martial (*kshatra*) energy. Now, as Paraśurâma was a Brâhmaṇa by caste but did the duties of a Kshatriya, what the verse insinuates is that Bhartṛibhaṭṭa was a Brâhmaṇa by extraction but did regal duties. I have said above that this inscription like that of Śaktikumâra pertains to the second half of the 10th century A.D. These are the earliest records that refer to the Brâhmaṇa origin of the Guhilot dynasty, and it is indeed wonderful that this origin was not forgotten by the people even to a very late period. Thus Mûtâ Neṇsî,[1] whose *khyât* or chronicle is known all over Râjputânâ and who flourished in the reign of Jaswantsingh of Jodhpur (A.D. 1634—1681) quotes the following *chhappaya* regarding the origin of Râṇâ's family :—

आदि मूल उतपत्ति ब्रह्म पण क्षत्री जांणां ।
आणँदपुर सिणगार नयर आहोर वखांणां ।
दल समूह राव रांण मिले मंडलीक महाभड़ ।
मिले सबै भूपती गरू गहलोत नरेस्वर ।
एकल्ल मल्ल धूज्यूं अचल्ल कहे राज बापै कियौ ।
एकलिंगदेव श्रा दृठतां राजपाट इणपर दियौ ॥ १[2]

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[1] Mûtâ Neṇsî was by caste an Osvâl of the Muṇoyat *khâmp*. His father's name was Jayamalla, who had two wives named Sarûpade and Sauhâgade. From the first he had three sons, of whom Neṇsi was the eldest. Jayamalla was a Diwan of Mahârâj Gajsingh of Jodhpur, who, in accordance with the orders of the Moghul emperor Jehangir, wrested the fort of Jâlor from the Bihârî Paṭhâṇs of Pâlaṇpur. After the capture of the fort, Jayamalla installed new images in the Jaina temples on it. His son Mûtâ Neṇsî was a Diwan of Jaswantsingh I, son of Gajsiṁha. It was during his tenure of office that he wrote a history, in Mârwârî prose, of Mârwâr and various Râjpût tribes, which is known as *Mûtâ-Neṇsî-rî khyât*, and is looked upon as of the highest authority throughout the whole of that country. The chronicle is divided into two parts. The first gives an account of the Râṭhods and of the villages and provinces of Mârwâr held by Jaswantsingh. The second part deals with the description of the other Râjpût tribes, such as Sisodiyâ, Bhâṭi, Sonigrâ, Paṁvâr, and so forth. After enjoying the post of the Diwan for some time, he was put into prison by Jaswantsingh, and one lac of rupees was demanded of him as his ransom. But Mûtâ Neṇsî refused to pay it, and committed suicide. The Mahârâjâ thereupon dismissed the Muṇoyats from his service, all of whom, therefore, left Jodhpur, went to Nâgaur, and sought refuge with the Râṭhod Rao Râysingh, who was no doubt a nephew of Jaswantsingh, but had obtained the province of Nâgaur from the Moghul emperor and was thus independent of him. Neṇsî's son Karamsî became his Diwan.

[2] This *chhappaya* was copied from Pandit Gaurishankar's copy of Mûtâ Neṇsî's *khyât*. The text of it was here and there a little grammatically incorrect, and I am indebted to Kavirâjâ Murârdânjî of Jodhpur for making the necessary corrections.

TRANSLATION.

"A Brâhmaṇa is the first cause of (his) extraction, but (we) regard (him) as a Kshatriya. He is the ornament of Ânaṁdapura, (and) his (capital) town, we say, was Âhora. Under him were united multitudes of armies, Râvas. Râṇâs, great soldiers and feudatory chieftains. All kings and preceptors joined the Gahalota king. It is said that this incomparable athlete Bâpâ exercised supremacy immovable like the pole star. The god Ekaliṅga, being pleased, bestowed the regal throne on him."

The second *chhappaya* is not here cited, as it has no direct bearing on the present subject. But it states at the end that Bâpâ was the son of Guhâdita (Guhâditya), and specifics Bhairava as the name of the composer of the poem. This poem is in a Mârwâṛî dialect called Ḍiṅgaḷ, and cannot be much earlier than the time of Mûtâ Neṇsî, and in it, it is distinctly mentioned, as we have just seen, that Bâpâ was originally a Brâhmaṇa but is now regarded as a Kshatriya; so that it appears that as late as the middle of the 17th century, the Brâhmaṇa origin of the Râṇâ family and the name of their native place Ânandapura (Vaḍnagar) from where they emigrated were alive in the memory of the people. Nay, what is most surprising is that this origin was not unknown even till after the middle of the 19th century when the work called *Tawârikh Mâlwâ* was composed by Munshi Karimud-dîn. This book, as the name implies, deals with the history of the whole of Mâlwâ, and thus gives an account of the Baḍhvâṇî State governed by a Sîsodiyâ family. It gives a long description of the way in which its founder came to obtain Baḍhvâṇî. The author distinctly tells us that it is based on the authority of *Guru*, who must, I think, be taken to be the family priest of the Sîsodiyâ chiefs of Baḍhvâṇî. A summary of it, for which I am indebted to Munshi Devi Prasad, is as follows[1]: "The capital of this royal family was at first at Chitoḍ. It afterwards was Adâsgaḍh. The founder was Dhanaka. He was a BRÂHMANA and was called Gahlot. [Then follows a long genealogy from Udaya to Grahâdata.] The son of Grahâdata was Śrî-Bâpâjî.[2] He succeeded in propitiating

[1] My attention to this was, however, first drawn by Pandit Gaurishankar Ojha.

[2] In this account the author once tells us that Bâpâ was a Pallîvâl Brâhmaṇa. But this is a mistake, the earlier inscriptions unmistakably pointing to their originally having been Nâgar Brâhmaṇas, as we have seen above. Pallîvâl Brâhmaṇas were, however, intimately connected with the family. It was through the blessing of a Pallîvâl Brâhmaṇa that Râhapa, the reputed founder of the Sîsodiyâ branch of the Guhilot dynasty, obtained Chitor, as the *Râjaprasasti* informs us (*Bhavnagar Pr. and Sk. Inscrs.*, p. 151, v. 31). The Brahmanic origin of the family was not forgotten, and it was this intimate connection with the Pallîvâls that must have led the people to suppose that the Guhilots also were originally Pallîvâl Brâhmaṇas.

the god Śiva. One day the king of Chitoḍ died, and left no heir to his throne. It was decided that whosoever would be garlanded by a certain elephant was to be placed on the throne. Bâpâ was present on the occasion. The elephant put the garland round his neck not only once but thrice. Bâpâ was thus seated on the throne. Bâpâ was one day suffering from some eye-disease. A physician mixed a certain medicine in liquor and applied it to his eyes, which were speedily cured. Bâpâ afterwards inquired of the physician about the ingredients of the medicine. He came to know the whole fact. He trembled like a cane, and said: "I am a Brâhmaṇa, and you gave me medicine mixed in liquor. I have lost my caste." So saying he drank molten lead (*sîsâ*) and forthwith died, and hence arose the family name Sîsodiyâ. The eldest son of Bâpâjî was Khumâna, who became ruler of Chitoḍ. His second son was Dhanaka, who, through fear of Khumâna, fled away from Chitoḍ to the Vindhyas on the Narmadâ....." The account speaks for itself, and allows us safely to infer that the Brâhmaṇa origin of the Guhilots was fresh in the minds of the people even so late as the middle of the nineteenth century.

What are the facts then? First we find that the founder of the dynasty was one Guhadatta, after whom the various names of the family, Guhilaputra, Gobhilaputra, Gûhilota, Gehlot and so forth were named. It need scarcely be further said that Guhila is but an abbreviated form of Guhadatta, just as Devala, *e.g.*, is of Devadatta. It is true, that some records speak of Bappa, Bappaka, or Bâpâ as the originator of the dynasty, but they are comparatively much later inscriptions, and I shall in my second paper show that Bappa was only a prince of the family of Guhila, though one of its early kings. Secondly, Guhadatta is said in Śaktikumâra's inscription of V.E. 1034 to have belonged to the family of Brâhmaṇas who came from Ânandapura. This means that it was not Guhadatta, but his ancestors, who emigrated from Ânandapura. And this is also expressly stated in the *Ekaliṅga-mâhâtmya*. Thirdly, as the ancestors of Guhadatta are said to have come from Ânandapura (Vaḍnagar), it can be reasonably concluded that they were Nâgar Brâhmaṇas. And this receives confirmation from the explicit statement to that effect, as we have seen, of the *mâhâtmya* just referred to. Fourthly, tradition tells us that their *gôtra* was Vaijavâpa, that it had three *pravaras* and that it pertained to the Yajurveda. Fifthly, this Brâhmaṇa origin of the Guhilots continues to be remembered almost to the present day.

If these Guhilots were thus originally Brâhmaṇas, how is it that they became Kshatriyas? This is the question that must now naturally arise. It is true that, in attempting to answer it, we are treading not quite upon *terra firma*; yet a view might be expressed, which, I believe, will not be thought

to be transcending the bounds of sober speculation. The traditional account given by Tod traces the descent of the Râṇâ's family from Śîlâditya, the last prince of Valabhi, who was killed in the Muhammadan raid. This, however, does not stand the test of our present epigraphic knowledge. The last king of Valabhi was Śîlâditya VII, and the date we have for him is G.E. 447[1] = A.D. 766, before which he cannot be supposed to have been killed and his capital sacked by the Muhammadans. On the other hand, the earliest prince of the Guhilot dynasty, for whom a date has been obtained, is Śîla, and his date is V.E. 703 = A.D. 646,[2] nearly one hundred and twenty years before the time of the last Valabhi ruler. This Guhilot Śîla again was five generations removed from Guhadatta, the founder.[3] This takes Guhadatta to circa 546 A.D. Although thus the statement that the Râṇâ's family was descended from Śîlâditya, the last prince of Valabhi, is not supported by inscriptions, there cannot be any doubt that the Mewâr and Valabhi dynasties were somehow connected. It is during the period of the supremacy of the Valabhi princes that we for the first time hear of the Nâgar Brâhmaṇas. Many copper-plate charters have been found of the Valabhi kings, which speak of the Brâhmaṇa grantees as originally of Ânandapura or Ânarttapura, *i.e.*, Vaḍnagar. If any further proof be needed, it is supplied by the mention of Śârkkarâkshi as the name of the *gôtra* of some of these donees. This *gôtra*, the Nâgars maintain, is to be met with in no other caste than their own.[4] Now, the following extracts from the copper-plate inscriptions of the Valabhi princes regarding the grantees, who were Brâhmaṇas of Ânandapura, are worthy of note :

I. Alînâ plates of G.E. 270.

आनर्त्तपुरविनिर्गतखेटकनिवासिशार्क्कराक्षिसगोत्रवह्वृचसब्रह्मचा-
रिब्राह्मण—मित्रपुत्रब्राह्मणविष्णुमित्राय [5]

II. Alînâ (now Royal As. Soc.'s) plates of G.E. 447.

श्रीमदानन्दपुरवास्तव्यतच्चातुर्विद्यसामान्यशर्क्कराक्षिसगोत्रवह्वृचस-
ब्रह्मचारिभट्टाखण्डलमित्राय भट्टविष्णुपुत्राय [6]

[1] *Gupta Inscrs.*, p. 173.

[2] This inscription was originally at Sâmolî in the Bhûmaṭ district, Udaipur State. It was first discovered and saved from destruction by Pandit Gaurishankarji, who has now kept it in the Ajmer Museum.

[3] All this will be seen clearly from the dynastic list, which will be published in my second paper.

[4] *Gujarât Population* in the *Bombay Gazetteer*, vol. ix, pt. i, pp. 13-14.

[5] *Ind. Ant.*, vol. vii, p. 72.

[6] *Ibid.*, p. 85 : *Gupta Inscrs.*, p. 173.

III. Alînâ plates of G.E. 330.

आनर्त्तपुरविनिर्गतकासरग्रामनिवास्यानर्त्तपुरचातुर्व्विद्यसामान्य-
शार्ङ्करात्तिसगोत्रवह्वृचसब्रह्मचारिब्राह्मणकेशवमित्रपुत्रब्राह्मण-
नारायण(ण)मित्राय [1]

IV. Alînâ plates of G.E. 337.

आनन्दपुरविनिर्गतखेटकवास्तव्य(व्या)नन्दपुरचातुर्विद्यसामान्यशार्ङ्क-
रात्तिसगोत्रबह्वृचसब्रह्मचारिब्राह्मणकेशवपुत्रब्राह्मणनारायणाय [2]

All these are from four copper-plate inscriptions of different dates, but all found at Alînâ and belonging to the Valabhi princes. The grantees are all Brâhmaṇas of the Śârkkarâkshi *gôtra* and natives of Ânandapura or Ânarttapura, *i.e.*, Vaḍnagar. They were thus Nâgar Brâhmaṇas by caste. Now, what deserves to be noticed in this connection is that the names of the donees and their fathers end in *mitra*, so far as the first three inscriptions go. What is the significance of this suffix? Are we to suppose that they are simply integral parts of the individual names themselves, and not anything separable from them? Inscription No. IV militates against this supposition. For the grantee therein mentioned is also the grantee of Inscription No. III, *viz.*, Nârâyaṇa, son of Keśava. In the latter the suffix *mitra* is attached to the names of both, but is conspicuous by its absence in the former. *Mitra* cannot, therefore, be considered to be a necessary part of the proper name. Can we then suppose that it is a mere honorific suffix like *śarmâ*, attached to the names of Brâhmaṇas? This supposition also does not seem probable, for such an honorific suffix as applied to the Brâhmaṇas is unknown to Sanskrit literature and Indian epigraphy.[3] Again, in Inscription No. II, both the grantee and his father, who are called *mitra*, are also styled *bhaṭṭa*, which would be superfluous if *mitra* were, like it, a mere respectful title of address. Besides, *mitra* is found conjoined to the names of those Brâhmaṇas only, who belonged to the Śârkkarâkshi *gotra* and were originally of Ânandapura, in short, those whose claims to being of the Nâgar caste were indisputable. This is worthy of note, that the suffix *mitra*, which occurs in the grants of the Valabhi princes,

[1] *Ind. Ant.*, vol. vii, p. 75. [2] *Ibid.*, p. 79.

[3] So far *mitra* has been found attached to the names of kings only. Several coins have been found in Oudh, Rohilkhand, Gorakhpur, and so forth, the legends on which give the names of kings ending in *mitra*. Will it be unreasonable to suppose that these kings, the Maitrakas, and the Nâgar Brâhmaṇas originally belonged to the same race? (Cunningham, *Coins of Ancient India*, pp. 69, 74, 79, 93; Carlleyle and Rivett-Carnac, *Jour. Beng. As. Soc.*, 1888, pt. i, pp. 21-8 and 87-90.) I think there were three inroads of this tribe. The first and earliest is attested by the find of these coins. It was at this time that the Magas also became known. The next two are described on p. 188.

only so far as my knowledge goes, is found attached to the names of no other Brâhmaṇas but those who, for the reasons just stated, cannot but be considered to be Nâgars. Now, the term Nâgar which designates a specific class of Brâhmaṇas in Gujarât is of comparatively recent origin. It is popularly believed to have been derived from the name Nagara, by which Vaḍnagar was also known, as will have been seen from verse 7 of a *praśasti* of Nânâka quoted above. The name Nâgar could not have been much earlier than the time of Kumârapâla in whose Vaḍnagar *praśasti* they are called Nagaras.[1] But there must have been some other caste or tribal name by which they were in early days distinguished from other Brâhmaṇas. And I cannot resist the temptation to say that Mitra was the actual name by which they were known, and which, at any rate, served to distinguish them from other Brâhmaṇa castes. The practice of giving caste, after individual, names is yet very common in Râjputânâ, and even now, to a large extent, in Gujarât also. There is nothing, therefore, that runs counter to the supposition that the Nâgar Brâhmaṇas mentioned in the copper-plate inscriptions of the Valabhi princes alluded to above gave only their caste name, *viz.*, Mitra, after their own and their father's names. I need only add here that this remark is confirmed by what I shall have subsequently to say. Let us now see who the Valabhi princes were, in other words, to what tribe they belonged. Almost all the copper-plate charters, which mention Bhaṭârka, the founder of the Valabhi dynasty, describe him thus : प्रसभ-प्रणतामित्राणां मैत्रकाणामतुलबलसपत्नमण्डलाभोगसंसक्तसंप्रहारशत-लब्धप्रताप etc., etc. When I first began the study of the Valabhi inscriptions, I naturally understood *Maitrakâṇâm* to be connected with Bhaṭârka, concluded that Bhaṭârka was a Maitraka, and wondered why this interpretation did not suggest itself to the scholars. But I soon found that this view had already been published by no less a scholar than Professor Hultzsch.[2] I am, therefore, now confident that this interpretation alone will

[1] It is worthy of note that in the Vaḍnagar *praśasti* of Kumârapâla alluded to above (*Ep. Ind.*, vol. i, pp. 295, 299 and 303), while the town is called Ânandapura, the Brâhmaṇas residing in it are called Nagara. This seems to show, I think, that till this time Vaḍnagar was not known as Nagar and that the caste name Nagara, the same as the modern Nâgar, was not derived from that of the city. In this connection the following learned words of the late Sir James Campbell deserve to be noticed : "The facts that there are Nágaras among Gujarát Wánias : that Nágaras are 50,000 strong among the Gûrjaras of Bulandshahr (N.W.P. Gazetteer. III, 48) ; and that Nágaras appear as Nagres among Jats (Siálkot Gazetteer, 45) add to the doubt of the correctness of the Gujarat Nágara claim to be Bráhmans" (*Gujarat Population* in the *Bombay* Gazetteer, vol. ix, pt. i, p. 438, note 9). Nâgars were probably originally a clan or sept of Maitrakas

[2] *Ep. Ind.*, vol. iii, pp. 319 and 320.

ultimately prove itself to be the correct one, especially as the correct reading is *sapatna* and not the meaningless *saṁpanna* as has been conclusively shown by the learned professor. No reasonable doubt need, therefore, be entertained as to Bhaṭârka and consequently the Valabhi princes being Maitrakas. And we have already seen that the Nâgar Brâhmaṇas of their copper-plates have been styled Mitras. It is difficult to avoid the conclusion that Maitraka and Mitra denote one and the same tribe, just as we know that the Solankîs of Gujarât have been called by one and the same poet once Chaulukyas and at another time Chulukyas.[1] We thus see that the Valabhi princes and the Nâgar Brâhmaṇas originally belonged to one ethnic stock; and we need not, therefore, wonder that tradition connected the Mewâr with the Valabhi family. We shall now proceed a step further. Dr. Bhagwanlal Indraji makes the following remarks regarding the Maitraka tribe: "Though these Maitrakas are mentioned in no other records from Surâshtra there seems reason to identify the Maitrakas with the Mihiras the well-known tribe of Mehrs or Mers. In Sanskrit both *mitra* and *mihira* are names of the sun, and it would be quite in agreement with the practice of Sanskrit writers to use derivatives of the one for those of the other." It is, I believe, impossible to dissent from this view, as a whole. Now, according to the Kâṭhiâwâr Gazetteer, there were two hordes of the Mers, which poured into India at two different times. The earlier of these waves is, I think, represented by the Maitrakas, and the later by Mers, who are still found in Kâṭhiâwâr and Râjputânâ. It would be interesting to know what this tribe Maitraka or Mihira was. The earliest Maitraka inscription we have is the Kukaḍ grant, dated G. E. 207[2] = A.D. 526, of the Valabhi king Dhruvasena I. Dhruvasena was the fourth reigning prince of his dynasty, being preceded to the throne first by his father Bhaṭârka and next his two elder brothers Dharasena and Dronasiṁha. This places Bhaṭârka circa 500 A.D. It is known that the Gupta sovereignty over North India was overthrown by the Hûṇas, and the latter themselves ousted by Yaśodharman. The date of the last Gupta prince Budhagupta is A.D. 485 and that of Yaśodharman A.D. 533.[3] The Hûṇa supremacy, therefore, lasted some time between A.D. 485 and 533. And the rise of the Maitraka power, as we have just seen, took place about 500 A.D., exactly at the time when the Hûṇas were supreme. This seems to show that the Maitrakas were, like the Gûrjaras, a tribe allied with the Hûṇas, and entered India with them. Further, it is worthy of note that the Gûjaras in Mârwâr at any rate accost each other and also address

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[1] Someśvara, the court-poet and priest of the Solaṅkis (Vâghelâs) speaks of them as Chaulukyas in the *Kîrtikaumudî*, and as Chulukyas in the *praśasti* in Tejapâla's temple at Dilvâdâ, on Mount Âbû.

[2] *Ind. Ant.*, vol. v, p. 205. [3] *Gupta Inscrs.*, pp. 89 and 152.

each other in their letters as Mehars.[1] This is perhaps an indication of the Maitrakas or Mers originally having pertained to the Gûrjara stock. Maitrakas[2] thus appear to have first penetrated India early in the sixth century. When the second swarm of the tribe but with the name Mihira poured into India, the first seems to have been merged into it, both being essentially one tribe. This perhaps explains why no name derived from Maitraka is now traceable in any one of the present tribes.[3] The Mers, on the other hand, are numerous, and are found both in Râjputânâ and Kâṭhiâwâr, as stated above.[4] There is a tract of land called Mervâḍâ near Ajmer, which goes by the name of this tribe. In Kâṭhiâwâr the Mers are still found in large numbers round the Bardâ hills, while the Porbander chiefs, who are known as Jeṭhvâs, are recognised as the head of the tribe. Merâ or Mehrâ is a common surname among Sindhi Baluchis. Many of the best Musalman captains and pilots from Kâṭhiâwâr, Cutch, and the Makrân coast still have Mer as a surname. Mehr is also a favourite name among both Khojahs and Memans, the two special classes of Kâṭhiâwâr, converts to Islâm. Mehr, Mihr, and Mahar are also used as titles of respect. The Khânt Kolis of Girnâr still honour their leaders with the name Mer.[5] If Mer or Mehr, which is a tribal name, is to this day used as a surname, it is perfectly intelligible that the Brâhmaṇa grantees of the Alînâ copper-plate charters alluded to above used, as a sort of surname after their individual names, their tribal name Mitra, which, like Mihira the Sanskritised form of Mer or Mehr,[6] denotes the sun and is thus identical in meaning, and is, as said above, but another name of the same tribe.

That the Guhilots were originally Nâgar Brâhmaṇas, afterwards become Kshatriyas, is certain and incontrovertible, as we have seen above. And now we see that the Nâgar Brâhmaṇas were Maitrakas, and the Maitrakas were, like the Gûrjaras, a foreign race and intimately connected with them. I have shown in my paper on the Gûrjaras that they

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[1] This information I received from several intelligent Gûjars, whom I met with during my travels in Râjputânâ. Even so recently as the close of January last when my camp was at Jâlor in Mârwâr, I found another Gujar who corroborated this information.

[2] In the *Manu-saṁhitâ* (cap. 10, v. 23), a mixed caste called Maitra is mentioned. Is it the same as our Maitraka ?

[3] These Maitrakas are by some identified with the Meds or Medhs, who, to the Arab invaders of the 8th and 9th centuries, were the chief people of Kâṭhiâwâr both in Soraṭh in the south and in Mâliâ in the north (*History of Gujarat* in the *Gazetteer of the Bombay Presidency*, vol. i, pt. i, p. 140, note 5).

[4] For the inscriptions of the Mihiras, *vide Ind. Ant.*, vol. xv, p. 360 and Dr. Fleet's interesting note thereon.

[5] *History of Gujarat* in the *Gazetteer of the Bombay Presidency*, vol. i, pt. i, p. 141, note 1.

[6] *Jour. Bomb. As. Soc.*, vol. v, p. 3; *Ind. Ant.*, vol. xv, p. 361.

were a foreign tribe. I have also therein put forth the theory that when a stranger tribe is settled in India and is Hinduised, the various classes composing it borrow the names of those castes, already existing, whose occupations they respectively pursue. The priests of the foreign tribe accordingly became Brâhmaṇas, their warriors Kshatriyas, their goldsmiths *Soṇîs*, their carpenters *Suthârs*, and so forth, and are distinguished from others only by the tribal, prefixed to the caste, name, the former being thus reduced to a mere surname. We thus have instances of Âbhîra Brâhmaṇas, Ahir Sutârs, Ahir Sîmpîs, Gujar Soṇîs, Gujar Luhârs, and so on. It is indeed very flattering to find that a veteran scholar and antiquarian like Dr. Höernle has expressed his full concurrence with me in this respect.[1] And I now proceed one step further. While this process of fusion continues, but before the various classes of the stranger tribe are finally crystallised into rigid castes, it is possible that a portion of the people of one class gave up their hereditary calling and pursued that of another into which they were ultimately merged, leaving a trace of this fact in the composite name they bear. It is on this supposition only that the fact of the Guhilots having given up their original Brâhmaṇa, for Kshatriya, caste, as we have seen, is intelligible. We have already seen that a Châtsû inscription speaks of a Guhilot king Bhartṛibhaṭṭa as *Brahma-Kshatr-ânvita*, which I have translated by "possessed of (both) priestly and martial energy," but a footnote has been added below saying that what is also implied is that Bhartṛibhaṭṭa was a Brahmakshatrî, *i.e.*, belonged to the Brahmakshatrî caste. Bhartṛibhaṭṭa is not the only ancient king of India who is so called. In the Deopârâ inscription of Vijayasena of the well-known Sena dynasty of Bengal, Sâmantasena is described as *Brahma-kshatriyâṇâṁ kula-śiro-dâma*, which expression was rendered by Prof. Kielhorn by "head-garland of the clans of the Brâhmaṇas and Kshatriyas"[2] but which ought to have been rendered, I think, by "head-garland of the Brahmakshatrî family." That the latter is the correct translation is shown by the term *Brahmakshatra* used with reference to the Sena kings in the *Ballâla-charita*.[3] Now, there is a caste called Brahmakshatrî corresponding to this *Brahmakshatra*, the members of which are found all over the Panjâb, Râjputânâ, Kâṭhiâwâr, Gujarât, and even the Dekkan. In my opinion, as already stated, they were originally the Brâhmaṇa classes of new tribes afterwards turned Kshatriyas, before their final mergence into the Hindu society. The present Brahmakshatrîs no doubt say that they were "the descendants of Kshatriya women, who, at the time of Paraśurâma's massacre, were saved

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[1] *Jour. Roy. As. Soc.* for 1905, p. 30.
[2] *Ep. Ind.*, vol. i, pp. 306 and 312.
[3] This is published in *Bibliotheca Indica*.

by passing as Brâhmaṇa women.'' [1] This explanation is, however, given after the rigidity of castes had set in and when the idea of people of one caste passing into another is considered to be impossible. But if any proof is needed in support of my theory and if any further instance is required of the Nâgar Brâhmaṇas, in particular, turned Brahmakshatrîs, as we have seen in the case of the Guhilots, it is furnished by a Chhîpâ caste called Bandhârâ. This caste has been described accurately and faithfully, as all castes and tribes of importance in Mârwâr have been, in the *Census Report of the Jodhpur State* for 1891, vol. iii, which, in my humble opinion, deserves to be carefully studied by all Indian ethnologists.[2] This work is in Hindî, and I, therefore, translate a portion of it here into English: ''These (*i.e.*, Bandhârâs) are Brahmakshatrîs. They are in the districts of Jâlor and Jaswantpurâ, and do the work of weaving and dying turban and *oḍhnî* cloth. They are called Bandhârâs, because they first weave (*bândhnâ*) and then print cloth..... They call themselves NÂGAR BRÂHMAṆAS, and give the following account of their becoming Bandhârâs: ''The king of Hastinâpura desired to bestow a donation on some Nâgar Brâhmaṇas, but they did not accept it. The king, wrath at this, snapped their sacred threads and wanted to kill them. But they sought refuge with *Châmuṇḍâ-mâtâ* and wove (*bandhanâ*) one *chûndaḍî* for her. For this reason they were named Bandhârâs.'' [3] Here then we have an instance of a Brahmakshatrî caste, the people of which say that they were originally Nâgar Brâhmaṇas. This clearly explains how the Guhilots, who were also originally Nâgar Brâhmaṇas, became Brahmakshatrîs or Khatrîs, and also strengthens my theory that the various castes of the Brahmakshatrîs were originally the Brâhmaṇa classes of foreign tribes, which, after the process of fusion had set in but before it was complete, exchanged their priestly for martial pursuits.

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[1] *Gujarat Population* in the *Gazetteer of the Bombay Presidency*, vol. ix, pt. i, p. 55.

[2] The credit for making this volume a thoroughly reliable authority on Marwar ethnology is solely due to Munshi Deviprasad Munsiff, whose love for matters ethnic and antiquarian is only equalled by his energy and perseverance.

[3] pp. 482-483.

JUNE, 1909.

The Adjourned Meeting of the Medical Section of the Society was held in the Society's Rooms on Wednesday, June 9th, 1909, at 9-15 P.M.

LIEUT.-COLONEL F. J. DRURY, I.M.S., in the Chair.

The following members were present :—

Dr. A. S. Allan, Dr. G. C. Chatterjee, Captain F. P. Connor, I.M.S., Dr. H. Finck, Captain H. B. Foster, I.M.S., Lieut.-Colonel G. F. A. Harris, I.M.S., Dr. W. C. Hossack, Lieut.-Colonel J. G. Jordan, I.M.S., Dr. A. M. Leake, Dr. Indu Madhab Mallick, Lieut.-Colonel F. P. Maynard, I.M.S., Lieut.-Colonel A. H. Nott, I.M.S., Major F. O'Kinealy, I.M.S., Dr. J. E. Panioty, Major J. C. Vaughan, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitors.—Dr. T. K. Ghose, Dr. J. B. Reid, Lieut. F. H. Salisbury, I.M.S.

The minutes of the last meeting were read and confirmed.

Lieut.-Colonel Drury showed a case of leprosy with keloid complication.

Major O'Kinealy showed—(1) A case of a pharyngeal tumour which could be made to appear on the dorsum of the tongue by the patient. (2) A case of a functional laryngeal paralysis.

Captain Connor showed coloured drawings of a peculiar hypertrophia ulceration of the nose of unknown causation.

Dr. W. C. Hossack showed coloured drawings of plague pneumonia.

The following paper was read :—

A new Lactic Acid producing Streptothrix.—By DR. G. C. CHATTERJEE.

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19. The Loranthus Parasite of the Moru and Ban Oaks (*Quercus dilatata*, Lindl., and *Quercus incana*, Roxb.).

By E. P. Stebbing.

In July, 1896, Mr. I. H. Burkill, Officiating Reporter on Economic Products to the Government of India, read before the Asiatic Society of Bengal a paper [1] entitled "A Parasite upon a parasite—a *Viscum* apparently *V. articulatum*, Burm., on *Loranthus vestitus*, Wall., on *Quercus incana.*, Roxb."

The paper, as its title discloses, detailed a case of curious double parasitism of a *Viscum* on a *Loranthus*. The author also gave a list of other host plants of *V. articulatum* observed by such authorities as Brandis, Gamble, Kurz, Duthie, Talbot, etc.

The point of interest about this paper for my purpose here is Burkill's observation that *Loranthus vestitus* is quite a common parasite on *Quercus incana* in the Simla Hill States. He also records that it makes use about Simla of other hosts also, such as *Quercus dilatata* and *Machilus odoratissima*, Nees. Elsewhere it lives on *Odina Wodier*, Roxb., *Schleichera trijuga*, Willd., *Randia* spp., *Elœagnus* spp., and species of *Quercus* other than *Q. incana*.

A year later in August, 1907, at a meeting of the Asiatic Society some photographs and botanical specimens of a case of double parasitism of *Viscum articulatum* on *Loranthus vestitus* on *Quercus incana* from Ranikhet, Kamaon, at 6,000 ft., were exhibited on behalf of Dr. E. J. Butler, Imperial Mycologist.[2] In this case the *Viscum* was a very vigorous individual and had caused the death of the branch of the *Loranthus* beyond the point where it had fixed itself.

Both parasites were producing fruit.

A case of a similar kind was noticed by myself in June 1908 on *Quercus incana* growing at Peora, on the road between Almora and Bhim Tal.

Kanjilal in his Forest Flora notices that the parasite *Loranthus vestitus* is fairly common in Jaunsar and Tehri-Garhwal in the N.-W. Himalaya, and is generally found on oaks, especially *Quercus incana*. He mentions that at Kathian (in Jaunsar) hardly a tree has escaped attack.

In the *Indian Forester* Mr. J. S. Gamble, F.R.S., in a note

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[1] Journ. Asiatic Soc. Bengal, ii (new series). 7, p. 299 (1906).
[2] Proc. Asiatic Soc. Bengal, iii (new series), 8, p. lxxxvii (1907).

upon the damage done to Himalayan pines by Loranthaceous parasites wrote in 1894: "Those, too, who have the opportunity, whether in the hills or in the plains, should investigate the common species of *Loranthus* and *Viscum*, for it is understood that they do considerable damage in some places, and enquiry might lead to means of protection."[1]

Again, Mr. F. Beadon Bryant, now Inspector-General of Forests to the Government of India, and at the time Assistant Inspector-General, alluded to this subject in the *Indian Forester*.[2] Discussing the pernicious system of lopping Coniferous trees [Deodar (*Cedrus deodara*, Loudon), Blue Pine (*Pinus excelsa*, Wall.), Chir Pine (*Pinus longifolia*, Roxb.), etc.] and oaks in the Simla Hill States he wrote:—

"I noticed two very interesting results from this heavy lopping; first, the destructive effects of parasites in general and more particularly of a species of *Loranthus* (probably *L. vestitus*) on the oak in heavily lopped areas. In one forest, over a large area where lopping has been constant, nearly every tree had been thus attacked. Many of the trees have been already killed outright by the parasite, which appears to suck the life out of the trees, mainly through the wounds caused by lopping, and to fairly smother it. An examination of the trees showed that wherever a branch had been lopped off, the *Loranthus* had obtained a fresh holding place on the tree over which it gradually spreads, until there is more *Loranthus* than oak. It can be but a question of a few years, more or less, and the oaks in this forest will be exterminated."

In the year 1907 Sir John Hewett, K.C.S.I., Lieutenant-Governor of the United Provinces and Oudh, noticed that a number of the trees in the extensive grounds of Government House at Naini Tal appeared to be dying. He pointed out this fact to Mr. Lovegrove, at the time Officiating Conservator of Forests. The grounds are thickly planted with oak, and Sir John issued orders to commence cutting out the diseased and dying trees near the house. These operations have since, I believe, been considerably extended.

In none of the above recorded observations, with the exception of Mr. Beadon Bryant's, is any allusion made to the *effect* the growth of the parasitic *Loranthus* has upon the oaks *dilatata* and *incana*.

An inspection of the *Quercus dilatata* at Naini Tal undertaken in May, 1908 (after Sir John commenced his operations), has shown that the *Loranthus* has obtained such a hold over the trees, which are growing in considerable abundance throughout the station, that numbers of these are dying either under the unaided attacks of the *Loranthus* or under its attacks combined

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[1] Indian Forester, vol. xx, 177 (1894).
[2] Indian Forester, vol. xxii, 420 (1896).

with those of several insect bark and wood-borers (*Buprestidæ*, *Cerambycidæ* and *Scolytidæ*).

That the combination of a plant parasite and insect has the power to effect the death of trees is not unknown. It was recorded some years ago that *Viscum orientale*, Willd., grows upon the satin wood tree (*Chloroxylon swietenia*, DC.) in this manner in the low country forests in Ceylon, strangling the branches and leading to attacks of the longicorn borer *Æolesthes induta*, Newman.[1]

During May and June, 1908, an opportunity was offered me of studying the question on the ground both in the Government House grounds at Naini Tal, owing to the kindness of Sir John Hewett, in the station itself, and out in the district of Kumaun.

I may premise by stating that the principal oak in Naini Tal is the *Moru* oak (*Quercus dilatata*), whilst out in the district on the line of march I took (Khairna, Bellek, Siuni, Ranikhet, Chaubattia, Shahi Devi, Almora, Peora, Ramgarh and Bhim Tal) the oak chiefly met with was the *Ban* (*Quercus incana*). Both these trees are badly infested by the plant parasite *Loranthus vestitus*, Wall., and are also subject to attacks by species of Buprestid, Longicorn and bark-borer (*Scolytidæ*) beetles. The *ban* oak in the forest clothing the slopes on the Bhim Tal side of the hill on the Ramgarh-Bhim Tal road was also most seriously infested in 1908 by a scale insect which appeared to be seriously damaging the tree. Peculiar interest attached to the discovery of this insect since it proved to be a species of *Kermes* (subsequently described by Green[2] as *Kermes himalayensis*, sp. n.), this being the first record of the genus (a European and North American one) from the Indian Region.[3]

Briefly summarizing the investigations carried out in May and June, I may say that my observations have shown that the diseased and dying state of many of the oak trees in Naini Tal and throughout the Kumaun District is due to the attacks of either a parasitic *Loranthus* or to those of bark and wood-boring beetles belonging to the families *Buprestidæ*, *Cerambycidæ* and *Scolytidæ*, or to a combination of the attacks of both. The parasite *Loranthus* would appear to be as serious, or perhaps more serious, than the insect attacks to the Moru oak in the station of Naini Tal. Out in the district my short investigations seemed to show that the insects were as dangerous as the *Loranthus* to the *Ban* oak, whilst in the area infested by the scale insect the attacks of this latter far outweighed all others owing to its abundance and the rapidity with which it appeared

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[1] Indian Forester, vol. xxvii, p. 486.
[2] Green, Ent. Mon. Mag., Nov. 1908.
[3] Stebbing, Ind. For. Rec., vol. ii, No. 1, p. 26.

to suck out the sap from the crowns and all the branches when in any quantity on a tree.

Description of the Loranthus.—*Loranthus vestitus* is a small branching woody plant with dirty yellowish green leaves which are dark shining green above. It grows in great clumps and masses on the trees, resembling a giant mistletoe.

The fruit is yellowish and fleshy, and is almost sessile on the stem, which it thickly studs.

Damage done.—It is obvious since the *Loranthus* draws much of its sustenance from its host that the vitality of the latter must be to some extent impaired thereby. If this drain exerted by the parasite continually increases in intensity, the tree is finally killed. The damage done is easily recognizable. Infested trees appear to be dying from the crown downwards. They look as if they were becoming 'stag-headed.' Large branches in the crown, either on one side only or on two sides or throughout the whole crown of the tree, are seen to be bearing one or more clumps of the small thin-branched Loranthus growing out of them. At the point of juncture and below it the oak tree's branches are much swollen up, and contorted and gnarled. Gradually all the leaves of the host plant disappear, and the true crown of the tree consists of bunched-up masses of branches of the parasite. Gradually the oak tree dies, and its death is followed by that of the parasite.

As usually found in nature a tree is rarely infested by more than one or two clumps of the parasite situated on a branch which may in consequence of the drain upon it dry up and drop off, thus leading to the death of the *Loranthus*.

In Naini Tal, however, the state of affairs as at present appertaining is very different. Trees may be observed in the station, notably in Government House grounds and neighbourhood, in every stage of attack up to the final one of death: a branch or a few branches only may bear masses of the parasite; a third, a half, two-thirds or the whole crown may have been entirely replaced with the thick masses of the small dirty yellow, brown-leaved thin-branched Loranthus. The drain of sap thus set up results in a hideous contortion and deformation of the branches of the oak trees themselves, those bearing the parasite being swollen up into knots and burrs and thicknesses, and often presenting a most fantastic and bizarre appearance.

Of the power of the Loranthus to kill the trees no one who has seen the condition of many of the oaks in Naini Tal can have any doubt.

The reason for the present state of affairs is two-fold, and may perhaps be explainable as follows :—

(1) The tree-growth of the station consists largely of oaks amongst which the *Moru* species predominates.

(2) Owing to the climatic conditions to which the trees are exposed and the resultant dampness of the air, their trunks and branches are thickly enveloped in mossy coats. The presence of these coats doubtless greatly facilitates the spread of the pest, since the seed is carried about by birds and possibly adheres by means of its viscid coating to the hairs of small mammals, and is thus spread through their agency as well. From both it is easily caught up and retained by the mossy covering on the trees, its adherence to which is greatly enhanced owing to the viscid state of the seed; this covering also probably affords it a greater chance of successful germination.

The commonly accepted theory on the subject of the spread of Loranthaceous plants by birds is that the seeds pass through the digestive canals, and, being voided with the excrements, are then in a peculiarly favourable condition for germination, the seeds being deposited on the branches of the trees.[1]

Mr. G. M. Ryan, I.F.S., has proved this to be the case in the Konkan [2] where he states that *Loranthus longiflorus*, Desv., is parasitic on teak and the mango in the South Thana Forests (Bombay Presidency). This is also the species, I believe, which is parasitic on the *sal* (*Shorea robusta*, Gaertn.) in the Siwaliks. By personal observations Mr. Ryan was able to show that the viscid seeds of *L. longiflorus* are spread by the bird *Dicæum erythrorhyncus*, Lath. The bird plucks the berries from the parasite, extracts the seed from the epicarp, and after swallowing it whole clears the viscid matter from the inside of the epicarp and ejects this latter. The whole of this proceeding takes only thirty seconds, and the seed is passed out whole in from 8-12 minutes, and in the majority of cases without any excrement. From the position usually occupied by the bird when the seed is voided, the seed is said to be almost invariably deposited on a branch of the tree to which it adheres owing to its viscid surface.

That this is not the invariable method by which the seed of the *Loranthaceæ* is deposited is, however, evidenced by a paper contributed to the Transactions of the Linnaean Society [3] by Mr. F. W. Keeble. The writer of this paper shows that the species of Ceylon Loranthus with tubular flowers are ornithophilous, the bird most effective in their pollination being a honey-bird, a species of *Nectarinæ*. In the large-flowered species the buds remain closed; but when tapped, the corolla-lobes fly open with an explosion, and the pollen is scattered. The closing

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[1] "The Dispersal of Mistletoe," by H. P. C. Ashworth, in The Victorian Naturalist, August 1895.

[2] Indian Forester, vol. xxv, 472.

[3] Trans. Linn. Soc., London, 2nd Ser., vol. v, p. 96.

of the flower buds appears to serve the purpose of protecting the pollen against rain, while the violent expulsion of the pollen aids in its carriage by the visiting birds, their beaks being frequently found to be covered with pollen after visting the flowers. When the fruit is ripe the bird eats the succulent portion only, wiping off the seeds with its beak on a branch of the tree, to which they then remain attached owing to their viscid coating. If swallowed, the seeds are found to be digested and destroyed.

Now these two methods although they both lead to the dispersion of the seed do so in somewhat different ways, and it would appear to be a matter of some importance that observations should be undertaken as to the manner in which the seed of *Loranthus vestitus* is dispersed in Naini Tal. It is probable that there is some particular bird (or birds) which affects the oak trees and feeds upon the *Loranthus* seed, and it should not prove difficult to determine how the seed is spread by this agency. Also it should prove possible to determine whether any small mammals such as squirrels, etc., assist in this dispersion. There can, I think, be little doubt that the mossy coats of the trees greatly facilitate the adherence to, and subsequent germination of, the seeds of the parasite on the oaks.

I noticed that on a patch of *ban* oak near Peora (between Almora and Bhim Tal), whose stems and branches were quite free of moss, there was not a trace of the *Loranthus* present although on other parts of the route taken *via* Ranikhet, Chaubattia, Almora to Bhim Tal, this oak was in places badly attacked by the parasite.

Investigation has shown, as I have described elsewhere,[1] that the weakening of the trees under the attacks of the *Loranthus* leads to the attacks of bark-borer beetles and to those of Buprestid and Longicorn ones.[2]

This Loranthaceous attack would appear to require the serious attention of Mycologists, and an investigation made of it upon the ground before it would be possible to definitely prescribe steps for combating it. In the meanwhile, however, it would appear advisable that seriously infested branches should be lopped from the trees—the cut being thickly tarred—and that really badly infested trees should be removed. These are the remedies which I would suggest being put into force in Naini Tal.

In the absence of a Forest Mycologist in the Indian Forest Service I submitted my specimens to Dr. E. J. Butler, Imperial Mycologist to the Agricultural Department, for identification and advice upon the subject. Dr. Butler wrote in reply: "I am glad you have interested yourself on the subject, for I have long

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[1] **Ind. For. Records, vol. ii, pt. i.**

[2] SCOLYTIDÆ: *Dryocœtes Hewetti*, Steb., *Sphaerotrypes querci*, Steb.; BUPRESTIDÆ: *Amorphosoma* sp.; CERAMBYCIDÆ: *Lophosternus Hugelii*, Redtenb., *Xylotrechus Smei*, Lap. et Gory, *Xylotrechus Stebbingi*, Gahan.

felt the want of more specific information regarding the *Loranthaceæ* of India and the damage caused by them. Perhaps your notes will lead to some Forest Officer taking up the general question and giving us a complete monograph on the subject. It is a very interesting, and I should say, valuable one.''

I am in hopes that this brief note on what has all the appearance of becoming a serious menace to the oak forests of the Himalaya may lead to further investigation into the botanical aspects of the case. The insect pest of the trees I trust to be able to keep under surveillance myself.

To His Honour the Lieutenant-Governor, Sir John Hewett, my thanks are due for the courtesy with which he afforded me every facility for studying the infestation in the grounds of Government House at Naini Tal, and for his kindness in personally, at the commencement of my investigations, taking me round the latter and showing me numbers of infested trees.

20. The Constitutents of the roots of *Arisaema concinnum*, Schott, and *A. speciosum*, Mart.

By Bidhu Bhusan Dutta.

In June last Mr. Burkill asked me if I would analyse some tubers of *Arisaema*, and gave me the following note which explains his purpose :—

"*Arisaema* roots are used very sparingly by the Lepchas of Sikkim as a famine food, but not uncommonly as a food for pigs. They pull them up, as I have seen myself in the country near Pemionchi in May at their flowering time, and boiling them well once, make use of the pulp, throwing the water away. The intention of this last act is to remove the numerous fine needle-crystals of calcium oxalate which lie in the tissues and are so intensely irritating in the mouth and to the alimentary canal. Lisboa who, in passing, mentions *Arisaemas* as famine foods of Sikkim (Useful Plants of the Bombay Presidency, 1884, p. 267) notes the violent sickness which follows an indiscreet meal of them. He gives as a method of getting rid of the poison a burying in the ground so that acetous fermentation sets in. He evidently thought that the fermentation acts on the poison, whereas all it can do is to make easier the washing out of the crystals; it will, of course, at the same time, enormously reduce the food-value of the root because of the amount of starch lost in the process.

The simpler boiling method is obviously the right one.

Arisaemas are extremely common in Sikkim, especially the two collected for analysis,—*A. concinnum* and *A. speciosum*. It was chiefly the first that I saw under collection near Pemionchi.

No doubt the starch in these roots is much more abundant in autumn when the leaves of the plants are withering.

Sir Joseph Hooker gave the name of *A utile* to one of the species of this genus which he obtained in Sikkim, because it is eaten (*vide* Schott's Prodromus ystematis Aroidearum, 1860, p. 30, where it is briefly said—Rhizomata eduntur).

Several species of *Arisaema* are used medicinally in various parts of the Himalaya and South-Western China."

The roots received by me were dried in the air, reduced to fine powder, and then analysed. The figures recorded below show that both the species are fairly nutritious foods, *A.*

concinnum especially, as its tubers are the richer in nitrogen. The amount of starch present is as high as in many cereals.

	Analyses of *Arisaema concinnum.*	*Arisaema speciosum.*
Moisture	8·45	7·55
*Albuminoids	7·68	3·75
Fat	1·43	1·56
Carbohydrates	65·94	75·96
Fibre	8·90	6·13
†Ash	7·60	5·05
*Nitrogen	1·23	·60
†Calcium	1·17	·98
Silica	1·03	·63
Phosphoric acid ($P_2 O_5$)	·17	·54

21. Notes on Gaur and other old Places in Bengal.

By Monmohan Chakravarti, M.A., B.L., M.R.A.S.

In the annals of old Bengal Gauṛ and the tract round it played an exceedingly important part. This tract, in which lay Lakṣmaṇāvatī and Devī-koṭ of the Hindu period, as well as the five capitals of Bengal in the Musalman period, to wit, Lakhnāwaṭī (Lakhnautī or Gauṛ of the later times), Pāṇḍuā (or Fīrozābād), Tāṇḍa, Rājmahal (Āgmahal or Akbarnagaṛ) and Murshidābād (or Makhsūsābād) must necessarily demand special attention from local writers. The present article deals with the political and geographical changes of this locality, and incidentally discusses a number of doubtful or unsettled problems in the Musalman history of Bengal. For facility of reference a sketch map of the tract, prepared from Rennell's Atlas, plates ii, ix, xi, and xvii, is attached. The Atlas is based on the earliest British surveys in Bengal (1765—75 A.D.), and furnishes the only old maps giving fairly trustworthy details of the mofussil.

Lakṣmaṇāvatī or Gauṛ.

Its remains may be chronologically distributed under the following heads:—

Gauṛ Remains.

i.—The Hindu capital;

ii.—The early Musalman capital, from the time of Muḥammad-i Bakht-yār's occupation to its supersession by Pāṇḍuā, *circa* 599—739 H. (1202—1338 A.D.), a period of over a century and a third;

iii.—The later Musalman capital, about 860—972 H. (1456—1564 A.D.), a period of nearly a century and a decade.

iv.—Temporary Mughal occupations, as head-quarter by Munim Khān during a few months of 983 H. (1575 A.D.), and as subsidiary to the capital in the second viceroyalty of the prince Shāh Shuj'a, 1059—1069 H. (1649—1658 A.D.).

I. The Hindu Capital.

Hindu.

In a previous article, I adduced some evidence that indicated the existence of Lakṣmaṇāvatī as capital of Gauṛ from at least the eighth century A.D.[1] No authentic remains of this period

[1] *Notes on the Geography of Old Bengal*, J.A.S.B., 1908, pp. 281-2.

have yet been found. Traditions, some more than a century old, point, however, to the northernmost part of the city as being the old Hindu portion. Beginning at Pichli on the south bank of the Kālindi river, a large field covered with brick fragments was pointed out to Buchanan as the place where king Ādiśūr had dwelt. No fortifications were found, but "the situation is judicious as being high land of a stiff clay."[1] From this proceeding south over some high lands, is reached a square of about 400 yards surrounded by a ditch, called *Ballāl-bāṛi* or the palace of Ballāl Sena, who according to the *Aīn* had built a fort in Gauṛ. No buildings are now found inside, but the enclosure is surrounded by a gigantic wall, 50 ft. broad at top, 150 ft. at the base, and 20 ft. high, with a deep ditch outside 75 ft. wide.[2] Furthermore, Lakṣmaṇa Sena (the son of Ballāla) is said have had his capital at Gaṅgārāmpur, eight miles north-west of old Māldā, and to have excavated the largest sheet of water in the city, the Sāgar-dighi, 1600 × 800 yds., which lies two miles south-west of Ballāla's palace.[3]

In the northernmost part.

This traditionary attribution of the northernmost parts to the Hindus can be explained if the old course of the Ganges had flowed through the Kālindi, as I had suggested in my aforesaid article. In that case, the Hindus would naturally be attracted to its banks and would congregate in that locality, preferably on its south bank, as being less exposed to floods and attacks. The Ganges, after flowing through the Kālindi, would pass through the lowest sections of the present Mahānandā bed; and thus the formation of the extensive marshes and depressions on its both banks could be accounted for, as they could have originated only from the action of some deep and broad stream carrying enormous loads of silt like the Ganges. Moreover, Ekdālā, near Pāṅḍuā, where Shamsu-d-dīn Ilyās was besieged by the Delhi Sulṭān Fīroz in 755 H. (1354 A.D.), was seven *kos* from a river which Firishta identifies with the Ganges,[4] and this would fit in well with the above view of the old course of the Ganges.

II. The Early Musalman Capital.

Muḥammad-i Bakht-yār left the city of Nūdīah in desolation and made Lakhaṇāwaṭī his seat of government. This was done some years before 601 H., and after 596 H., the year in which he looted

Early Musalman.

[1] Martin's *Eastern India*, vol. iii, p 72.
[2] *Eastern India*, iii, p. 72; A.S.R., xv, p. 43; Creighton's map (1801) in his *Ruins of Gaur*.
[3] Ravenshaw's *Gaur*. p. 6; J.A.S.B., 1895, p. 226.
[4] Barnī and Shams-i-Sirāj Afīf, Elliot, iii, 294-5; *Riyāz*, transl., pp. 102; J.A.S.B., 1895, p. 228.

Nūdiah ; hence 599 H. has been taken as an approximate date. He and his Amīrs adorned the city with mosques, colleges and monasteries ; while Sulṭān Ġhiyāṣu-d-dīn 'Iwaz built Jāmi and other mosques, the fortress of Basan-koṭ and an embankment from the city to Dīw-koṭ on one side, and to Lakhaṇ-or on the other, about ten days' journey. Mention is also made of the gates of the city which was therefore fortified.[1] Barnī speaks of a great bazar within the city more than a *kos* long, and near it a palace of the old chiefs.[2] None of these old works have been traced. It is just possible that the high solid bank, running from near the civil station west to Sonātoli on the river, might be a part of the city walls. This has been hitherto identified with the *pul* (embankment) of Ġhiyāṣu-d-dīn ; but its size—30 to 40 ft. high, and 100 to 150 ft. at the base—is more in favour of its being a wall. The early Musalman city was a continuation of the Hindu city and, therefore, would have lain in the northern part.

Basan-koṭ.

The fort of Basan-koṭ with the city of Lakhaṇāwaṭī was captured in 624 H. (1227 A.D.) by the eldest son of Sulṭān I-yal-timish during the absence of Ġhiyāṣu-d-dīn ; and after the death of I-yal-timish in 633 H. (1236 A.D.) a battle took place for its possession between the feudatory of Lakhaṇāwaṭī Tughril-i-Tughan Khān and the feudatory of Lakhaṇ-or Aor Khān, within the environs of the city. The fort was therefore close to the city. Though said to have been founded by 'Iwaz, the name looks suspiciously Hindu, *cf.* Devī-koṭ, Bardhan-koṭ, Maṅgal-koṭ, Pañca-koṭ ; and it is not clear why a devout Musalman like Ġhiyāṣu-d-dīn would give a Hindu name to his own fort. I suspect that the place was Hindu, and had a fort on it, which was repaired or rebuilt by this Malik. Could it be the modern *Ballāla-bāṛi ?*

The loss of all the early works, Hindu or Musalman, is very disappointing. It must be said, however, that the northern part of the city has not yet been excavated or even well explored. The disappearance of these old remains is primarily due to two causes, the vandalism of men in utilising them as quarries, and riparian changes making the new channels cut westwards and sweep away or bury under silt the standing relics.

Fīroz Shāh, 702-722 H.

The first half of the fourteenth century was a period of great confusion and much civil war in Bengal ; and the few facts recorded by Barni and Ibn Baṭūṭah do not often agree with these deducible from coins. A brief résumé may therefore help readers. According to coins, Shamṣu-d-dīn Fīroz Shāh ruled from 702 to 722 H.[3] (1302—

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1 *Tabakāt-i-Nāṣiri* ; *cf.* my article, J.A.S.B., 1908, April.
2 Barni, Elliot, iii, pp. 119, 120.
3 For coins of 702 H., J.R.A.S., ii., 193, and of 722 H., *ibid.*, and

1322 A.D.) with his chief mint at Lakhnautī, and an additional mint at Sunārgāon. But in the latter part of the rule parallel series of coins are found issued in other names. For example, coins bearing the name of his younger son Bahādur Shāh with the mint Lakhnautī exist having the dates 710, 711, and 712 H. (1310—12 A.D.); while an inscription recording the erection of a mosque in the reign of Bahādur Khān and dated 711 H. is reported to have been lying in Goāmālti indigo factory of Gaur.[1] Furthermore, the eldest son, Shihābu-d-dīn Bughrā Shāh, succeeded his father *on his death*, according to Ibn Batūtah, but a coin of his with the mint Lakhnautī has the date 718 H.; while several coins of the younger son Bahādur have 720, 721, and 722 H. with the mint Lakhnautī. All these fall within the coin-period of Fīroz Shāh (the father).[2] Either then the later coins of Fīroz are posthumous, which cannot be accepted *primâ facie* as being quite unnecessary, or that the sons revolted issuing their own coins per force, for no king would voluntarily suffer this special prerogative of royalty to be used by others. Ibn Batūtah would, on this supposition, appear to have been misinformed or to have forgotten the exact details when he drew up his narrative at home.

Bahādur Shāh 720 ?-724 H., and 726?-730 H.

Finally Bahādur appears to have seized the throne after killing Ḳatlu Khān with some other brothers and driving out his elder brothers Shihābu-d-dīn and Nāṣiru-d-dīn. Apparently at the request of the latter, the Delhi Sultān, Ghiyāṣu-d-dīn Tughlaḳ, marched towards Bengal in 724 H., received the submission of Nāṣiru-d-dīn in Tirhut and sent his foster-son Tātār Khān towards Sunārgāon, where he defeated Bahādur and carried him prisoner to the Sultān. Tughlaḳ divided Bengal into three provinces, Vilāyet-i Lakhnautī, Satgāon and Sunārgāon, and making Nāṣiru-d-dīn governor returned homewards with Bahādur as prisoner.[3] The statement of Barnī about the governorship of Nāṣiru-d-dīn is supported by an unique rupee bearing the joint names of Tughlaḳ and Nāṣiru-d-dīn.[4]

Tughlaḳ's son Muḥammad ascended the throne in 725 H.

Lahore Museum Catalogue, p. 47; and for coins of intermediate years, cf. also P.A.S.B., 1883, p. 60, and *Indian Museum Catalogue*, 1908, vol. ii., p. 147, J.A.S.B., 1873. p. 249.

[1] For coins of 710—712 H., J.R.A.S., ii., 199; for inscription of 711 H., J.A.S.B., 1895. p. 215. Thomas suggests an imperfect die-rendering of 10 for 20, J.R.A.S , ii., p. 197.

[2] J.A.S.B., 1873, p. 250, I.M.C., i., 148, No. 13, cf. J.R.A.S., ii., 196, for Shihābu-d-dīn's coins; and for Bahādur's coins, J.R.A.S., ii., 199, I.M.C, ii., 148, No. 15.

[3] French translation of Ibn Baṭūtah's *Travels*, M M. Defremery and Sanguinetti, iii., 210, and Lee's English translation, p. 128; Barnī, *Tārīkh-i Fīrozshāhi*, J.A.S.B . 1871, pp. 244-5, Elliot, iii., 234 5, and l.c. *Riyāz*, translation, p. 91, note 1.

[4] For coin, see J.A.S.B., 1894, pp. 67-8.

(1325 A.D.). He placed Satgāon under 'Iẓẓu-d-dīn Yahyā surnamed Ā'ẓam-ūl-mulk, Lakhnautī under Bandār (? Pindar) Khaljī surnamed Ḳadr Khān, and Sunārgāon under his foster-brother Tātār Khān surnamed Baḥrām Khān (or nephew Ibrāhim Khān, Ibn Baṭūṭah).[1] He released Bahādur Shāh and sent him to Sunārgāon to rule jointly with Baḥrām Khān. Bahādur ruled acknowledging the suzerainty of Muḥammad, *vide* his coins of 728 H.; but he ultimately revolted and issued money in his own name from mints Sunārgāon and Ghīāspur. The Delhi emperor sent a force in aid of Baḥrām. Bahādur was defeated and killed, his latest coins being dated 730 H. (1329—30 A.D.).[2] Of this troublous period, Ibn Baṭūṭah's account runs thus:—

"He [the emperor] gave him numerous presents in silver, horses, elephants, and sent him back to his kingdom. He sent with him the son of his brother, Ibrāhīm Khān. He settled with Bahādur Bourah that they should possess the said kingdom in equal halves; that their names should figure together on the coins; that prayer should be offered in their common name, and that Ghiyātheddīn should send his son Muḥammad surnamed Berbath as hostage near the sovereign of India. Ghiyātheddīn departed and observed all the promises which he had made; only he did not send his son, as stipulated. He pretended that this latter had refused, and in his speech he offended against propriety. The sovereign of India sent to the help of his nephew Ibrāhim Khān troops under the commander Doldji Attatary. They fought against Ghiyātheddīn and killed him; they stripped him of his skin, which was stuffed with straw and then marched through the provinces."[3]

Fakhru-d-dīn, 737-750 H.
'Alī Shāh 740?-746 H.

The next chapter began with the death of Baḥrām Khān at Sunārgāon when his slave or armour-bearer (*sillādār*) Fakhrā broke out in rebellion.[4] Ḳadr Khān of Lakhnautī aided by 'Iẓẓu-d-dīn Yāhya of Satgāon and Ḥusamu-d-dīn Abūrijā (of Tirhut ?) defeated him. But the troops revolting killed Ḳadr and joined Fakhrā who took possession of Lakhnautī (with Satgāon, too, according to Barnī) and placed his servant, one Makhlis, in

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[1] *Tārīkh-i Mubārak-Shāhi*, l. c. *Chronicles*, p. 262, note 1; Badāoni, transl., ii., 302; Ibn Baṭūṭah, French transl., iii., p. 316.

[2] For coins of 728 H., J.R.A.S., ii., 199 J.A.S.B., 1876, p. 295, 1907, p 587; of 730 H., J.R.A.S., ii., 197 (mint Ghiāspūr).

[3] French transl., iii., p. 316.

[4] The earliest coin of Fakhru-d-dīn is dated 737 H. (1336-7 A D.), J.R.A.S., ii., p. 20; Blochmann would read the date 739 H., J.A.S.B., 1873, p. 252, to make it agree, I suppose, with Badāoni, i., p 398. The Bā.shazāri endowment of Pāṇduā has a grant-deed purporting to be from the Emperor, name not given, dated 5th Maḥarram of his 13th year. The deed, if genuine, refers evidently to the Emperor Muḥammad-i Tughlaḳ whose 13th year fell in 738 H., and its 5th Maḥarram on 3rd August 1337 A.D. It shows that in 738 H. Muḥammad's command was obeyed at least in Lakhnautī and Satgāon.

charge thereof. 'Ali, an army Inspector of Ḳadr, put Makẖlis to death and made himself master of Lakhnautī. War went on between Fakẖru-d-dīn Mubārak Sẖāh and 'Alāu-d-dīn 'Alī Sẖāh (to give their full titles) for several years.[1] Ibn Baṭūṭah visited East Bengal about 745 H. (1345 A.D.) and left the following contemporaneous account :—

"He [the emperor] appointed governor of this country one of his brothers-in-law whom the troops massacred. 'Aly Sẖāh, who was then in the country of Lakhnautī, took possession of the royalty of Bengal. When Fakẖreddīn saw that the royal power had gone out of the family of Sulṭān Nāṣireddīn, of which he was a slave, he revolted at Sodcawan (? Sunārgāon) in Bengal, and declared himself independent. A violent enmity took place between him and 'Aly Sẖāh. When arrived the time of winter and the seasons of wind, Fakẖreddīn made an incursion into the country of Lakhnautī by means of river on which he was powerful. But when came back the days in which it did not rain, 'Aly Sẖāh pounced upon Bengal by land-route, by reason of the power he had on this."[2]

Capital transferred to Pāṇḍuā in 739 H.

According to the histories, Hāji Ilyās, a nobleman of the court of 'Alī Sẖāh, revolted, thus adding to the confusion. His revolt is important in one respect. It enables us to fix approximately the time of the transfer of the capital. The latest coin with the mint Lakhnautī is a rupee of Muḥammad-i-Tughlaḳ, dated 733 H (1332—3 A.D.) ; but already in a bronze coin of his forced currency the mint has been denoted by *Iqlim Lakhnautī*, the clime of Lakhnautī and not the city.[3] After this comes a gap; and then follows a rupee of Shamṣu-d-dīn Ilyās Sẖāh, dated 740 H., and a rupee of 'Alī Sẖāh dated 742 H., both with the mint Fīrozābād, the Musalman name of Pāṇḍuā.[4] Apparently the transfer to Fīrozābād took place on the death of Ḳadr Kẖān about 739 H. The causes of this transfer are nowhere stated; but it was obviously connected with the changes in the river-courses, making Lakhnautī unhealthy and uninhabitable. The various civil wars with repeated plunderings of the city might have hastened the transfer; and new rulers would have felt little scruples in making the change.

[1] Barnī, Elliot, iii., 242-3; Badāoni, i., 308-9; Ibn Baṭūṭah, iv., 212.

[2] French translation, iv., 212. Ibn Batūtah arrived at Zafār Yemen in Maḥarram 748 H., which began on 13th April 1347 A.D. (p. 224); and calculating the number of days travelled (as mentioned) and adding some for those omitted, Ibn Batūtah would have visited Bengal about two years before, or say 745 H. at least.

[3] For the coins of 733 H., J.R.A S., ii., 200, J.A.S.B., 1904, p. 373. I.M.C., ii., 54, No. 327; for the bronze coin of 731 H., I.M.C., ii., 59, No. 382, J.A.S.B., 1883, p. 62.

[4] For 740 H., J.R.A.S., ii., 206; and for 742 H., *ibid.*, ii., 202.

III. The Later Musalman Capital.

Later Musalman.

This is the most flourishing period of Lakhnautī, its Augustan age, in which period were constructed the best and the finest remains now existing.

Capital again in 860 H.

Riyāẓ states that the capital was removed back to Gauṛ by Sulṭān Jalālu-d-dīn in 812 H.[1] The date cannot be correct, for Jalālu-d-dīn did not come to the throne before 817 H. He could not have removed the capital as none of his coins shows the mint Lakhnautī and most show Fīrozābād; while the coins of his son and his son's successor Maḥmūd (I) also show Fīrozābād. The *Riyāẓ* itself states that he and his son lie buried in Pāṇḍuā, which could hardly have been the case, if he had carried out the important measure of removing the seat of government. I think it is more likely that this removal took place in the time of Maḥmūd Sẖāh (I), towards the end of his rule. His extant coins show Fīrozābād up to 858 H.,[2] after which none of his has been found to bear that place-name; and this mint disappears altogether from the coins of subsequent reigns. Furthermore the earliest remains found in Gauṛ with a date were those of a bridge erected in 862 H., in Maḥmūd's reign; and probably the Kotwāli gate, half-a-mile south, is a little earlier. Hence 860 H. has been taken as an approximate date for the removal.

The transfer is largely connected with the physical changes of the locality. After much fluctuations, the Ganges seems to have found a comparatively stable course on the west of the city, and its floods probably raised the level of the city on its eastern part. By high embankments on the east and the west, it became now practicable to make the city habitable; and the deep stream flowing on the west must have greatly facilitated trade. On the other hand, the river receded from Pāṇḍuā and made it less accessible and more unhealthy. A change in the dynasty also facilitated the transfer.

Maḥmūdi Dynasty.—The principal remains belong to two dynasties, the Maḥmūdi and the Huseni.

Maḥmūd Sẖāh I., 842—864 H.

According to *Riyāẓ*, Sulṭān Jalālu-d-dīn built a mosque, a reservoir, a tank, and a caravanserai, none of which can be identified, unless the tank within the citadel, west of Ḳadam Rasūl mosque, sometimes called Jalāli, be one of his. The bridge of five arches over which the road passes south to Kotwāli gate was built in the reign of Maḥmūd Sẖāh according to an inscription, dated 5th Safar 862 H. (23rd December, 1457 A.D.).[3] The Kotwāli

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[1] *Riyāẓ*, transl., p. 118.
[2] For the latest Fīrozābād coin, 858 H., J.A.S.B., 1893, pp. 233-4.
[3] J.A.S.B., 1875, p. 289; A.S.R., xv, p. 57.

gate itself with its massive shape, sloping towers and deep niches having ornamental pillars seems sufficiently archaic to be placed in this reign, being in evident imitation of the early Musalman style of Delhi; and along with the gate, the high walls of the fortifications would have been built, as being among the first works needed for protection against floods and enemies.

Bārbak Shāh, 864—878 H.

The beginning of Maḥmūd's reign would be discussed *infra* (p. 225). His coins take him down to 864 H.; and one of the inscriptions in Pāṇḍuā to Monday 28th Ẓūl-hijjah 863 H., (?) (26th October, 1459 A.D.).[1] His son and successor Ruknu-d-dīn Bārbak Shāh has coins dated 864 H. Therefore, Maḥmūd's reign ended in 864 H. (beginning on 28th October, 1459 A.D.). An inscription reported by Major Francklin (1810) spoke of Bārbak Shāh having constructed in 871 H. a *naḥr* or aqueduct flowing inside the palace with a middle gate adjoining the same and leading to the palace interior.[2] The palace and the main gateway (of the citadel or of the outer fort?) had, therefore, been completed before 871 H (1466 A.D.). Traces of aqueducts have been found, beginning from the smaller Sāgardighi tank within the fort. and one leading from a tank within the citadel to the north of the palace.[3] The *Cor-khānā* or the so-called prison, a square domed structure with towers at the corners, may be a tomb, as Cunningham supposed, being similar to Eklākhi tomb of Pāṇḍuā; and from its old appearance and ruinous state may be a tomb of Maḥmūd or his son Bārbak.[4]

Yūsuf Shāh, 878—885 H.

Coins bring down the reign of Bārbak Shāh to 877 and 878 H.; and an inscription of his reign at Māhisantos, Dināj pur, was dated in 878 H.[5] The extant coins of his son and successor Shamṣu-d-dīn Yūsuf Shāh do not go back beyond 881 H.; but an inscription of his reign kept in the Ṣāṇkmohan mosque of old Māldā bears a date which has been doubtfully read 1st Jumādi-al-awwal 870 H. (20th December, 1465 A.D.) or 876 H. (16th October, 1471 A.D.) or 878 H. (24th September, 1473 A.D.); and another inscription reported by Francklin from Gauṛ was dated 1st Maḥarram 880 H. (7th May, 1475

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1 For coins of Mahmūd Shāh 864 H., J.A.S.B., 1883, p. 218; for his inscription of 863 H., *ibid.*, 1873, pp. 271-2 and date, p. 270; for coins of Bārbak, 864 H., I.M.C., ii, 167-8. Nos. 133-5 and 148. 28th Ẓul-hijjah of 863 H. falls, however, on a Friday and not Monday. Ilāhi Bakhsh reads 18th Ẓul-hijjah 833 H. (J.A.S.B., 1895, p. 207), but that fell on Thursday, 7th September, 1430 A.D.

2 Ravenshaw's *Gaur*, p. 18, note; A.S.R., xv, pp. 52-3.

3 *Gaur*, p. 34; Ilāhi Bakhsh, J.A.S.B., 1895, p. 221.

4 A.S.R., xv p. 56.

5 Coins of 877 and 878 H., J.A.S.B., 1883, pp. 219-220; inscription of 876 H., 1875, p. 291.

A.D.).[1] For the present, therefore, 878 H. (1473 A.D.) may be taken as the last year of Bārbak.

The mosque built, according to the aforesaid inscription of 880 H. by Yūsuf, is identified by Mr. Grote with the Tāntipārā mosque, "the finest of all the buildings now remaining in Gaur" (A.S.R., xv., p. 62), but by Cunningham with the Cāmkaṭṭi mosque (ibid., p. 60). An inscription found in the jungle near Darāsbāri or lecture-hall records the building of another mosque by Yūsuf in 884 H. (1479 A.D.); and a third Gauṛ inscription, dated 13th Ramaẓān 885 H. (17th November, 1480 A.D.), speaks of a mosque built in his reign by one Khāḳān Marjād Khān.[2]

Fath Shāh, 886—892 H.

The extant coins of Yūsuf go down to 884 H.; while an inscription of his reign in the golden mosque of Pāṇḍuā (? Gauṛ) reported by Francklin was dated Monday, 14th Maḥarram 885 H. (27th March, 1480 A.D.).[3] The earliest coins of his uncle and successor Jalālu-d-dīn Fath Shāh begin in 886 H.; while an inscription of the same at Bandar, Dacca, was dated 1st Ẓil-Ḳa'da 886 H. (22nd December, 1482 A.D.).[4] Yūsuf's reign may, therefore, be taken to have lasted till 885 H. (1480 A.D.). None of the Gauṛ remains is traceable to Fath Shāh himself. According to an inscription of Maḥdīpur, Gauṛ, dated Ramaẓān 891 H. (beginning on 31st August, 1486 A.D.) a mosque was built in his reign by one Sayyid Dastur.[5]

Bārbak Shāh II., 892 H.

Firoz Shāh II., 892—896 H.

Habshi Kings.—Fath Shāh was murdered by an eunuch conspiring with the palace-guards; and this eunuch seized the throne under the name Shāhzādah Bārbak Shāh. Coins of Fath Shāh go down to 892 H.; and an inscription of his reign found at Satgāon is dated 4th Maḥarram 892 H. (31st December, 1486 A.D.).[6] After a short rule, the eunuch was murdered by an Abyssinian officer who became king under the name, Saifu-d-dīn Fīroz Shāh. His coins also begin from 892 H.[7]

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[1] Coins of 881 H., P.A.S.B., 1893, p. 145, I.M.C., ii, p. 169, No. 149, B.M.C., p. 38, No. 93. Inscription of 870 or 876 H., J.A.S.B., 1874, p. 298, 1896, p. 199, or 878 H., A.S.R., xv, p. 78; for 880 H., *Gaur*, p. 30, note.

[2] Inscription of 884 H., J.A.S B., 1895, pp. 222-3; of 885 H. *Ep. Ind.*, ii, 284, date read by Blochmann 10th Ramaẓān, J.A.S.B., 1873, pp. 277-8, 275.

[3] Coin of 884 H., J.A.S B., 1846, p. 329. l.c., 1873, p. 275; inscription of 885 H., *Gaur*, p. 56, note, cf. J.A.S B., 1894, pp. 88-9.

[4] Coins of 886 H., J.A.S.B., 1873, p. 282, P.A.S.B., 1893, p. 145, I.M.C., ii, pp. 169-170, Nos. 153 and 154; inscription of 886 H., J.A.S.B., 1873, pp. 282-3.

[5] *Ep. Ind.*, ii, p. 287, cf. A.S.R., xv, p. 65.

[6] Fath Shāh's coin of 892 H., J.A.S.B., 1846; inscription of 892 H., J.A.S.B., 1870, pp. 293-4.

[7] For Fīroz's coin of 892 H., I.M.C., ii, 170, No. 159.

The eunuch's rule, therefore, lasted only for a very few months. *Riyāẓ* credits Fīroz Shāh with the construction of a mosque, a tower, and a reservoir. The mosque has not yet been traced. The tall minar and the tank to its east, both within the fort, are ascribed to him. But in the absence of inscriptions, nothing definite can be said; and the minar has been ascribed to various other sulṭāns, *e.g.*, to Fīroz Shāh I by Fergusson, to the time of Maḥmūd I by Cunningham, and to Huṣen Shāh by Dr. Bloch.[1] Fergusson is probably right in considering it to be a *jaya-stambha* or a 'pillar of victory.'

Maḥmūd Shāh II, 896 H.

Fīroz was succeeded by Nāṣiru-d-dīn Maḥmūd Shāh (II), but the histories do not agree as to the nature of Fīroz's death and the relationship with him of Maḥmūd. Firishta says that he died a natural death; the *Aīn* says that he was killed by the palace-guards (*pāiks*). Both Firishta and *Aīn* declare Maḥmūd to be the son of the Habshi Fīroz Shāh; but Firishta quotes from the history by Hājī Muḥammad Ḳandahārī a statement that Maḥmūd II was a son of Fath Shāh. Fīroz's coins go down to 896 H., and in one doubtfully to 897 H.; and his latest inscription at Chunakhāli, Murṣidābād, to 2nd Maḥarram 896 H. (?), 15th November, 1490 A.D.[2] Maḥmūd Shāh (II) could not have, thus, ruled more than a few months. He was murdered by an Abyssinian who made himself king under the name of Shamṣu-d-dīn Muẓaffar Shāh. Muẓaffar's coins begin from 896 H.; and the earliest known inscription of his reign at Devī-koṭ, Dinājpur, is dated 896 H. (1491 A.D.).[3] In the *Riyāẓ* Muẓaffar is said to have built in Gauṛ a mosque and a treasury; and the latter may be the place within the palace now called *Khaẓānci*. He was killed by one of his noblemen,[4] who ascended the throne as 'Alāu-d-dīn Huṣen Shāh. The latest coins of Muẓaffar is dated 898 H.; and the latest inscription of his reign in the Chotidargah of Pāṇḍuā is dated 17th Ramaẓān 898 H. (2nd July, 1493 A.D.),[5] while Huṣen's coins and inscriptions begin from 899 H.

Muẓaffar Shāh, 896—898 H.

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[1] *Hist. Ind. and East. Arch.*, p. 550; A.S.R., xv, pp. 57-8; Arch. Sur. Beng. Cir., 1902-3, p. 6.

[2] For Fīroz's coin of 896 H., P.A.S.B., 1893, p. 145, and of 897 H. (?), J.A.S.B., 1846, p. 330; for inscription, P.A.S.B., 1893, p. 55.

[3] Muẓaffar's coin of 896 H., J.A.S.B., 1873, pp. 311-3, P.A.S.B., 1898, p. 170, I.M.C., ii, 171, No. 163; his inscription of 896 H., J.A.S.B., 1873, pp. 289-290, A.S.R., xv, 98-99. The illegible year of the inscription of Maḥmūd Shāh II in the Choti dargah of Pāṇḍuā must therefore be 896 H.; and if Cunningham be right as to the month, then the date comes to 23rd Rabi I, 896 H., or 3rd February, 1491 A.D.; J.A.S.B., 1873, p. 289, *Gaur*, pp. 76-7, A.S.R., xv, 84.

[4] Bābar's *Memoirs*, Elliot, iv, p. 261.

[5] Muẓaffar s coins of 898 H., J.A.S.B., 1893, pp. 238-9, I.M.C., ii, pp. 171, 172, Nos. 164 and 165; inscription of 898 H., 1873, pp. 290-1.

Husẹni Dynasty.—During the vigorous rule of 'Alāu-d-dīn Husẹn Shāh, "the Sulṭān conqueror over Kāmrū and Kamtah, Jājnagar and Orissa" (*vide* his coins), the city was adorned with various notable structures. The king built a Madrasah or College (inscription dated 1st Ramaẓān 907 H., 10th March, 1502 A.D.), and two gateways of the tomb of Makhdūm Shaikh Ākhī Sirāju-d-dīn in the northern suburb (inscriptions of 916 H., 1510 A.D.). He also built a gateway of the fort (inscription of 918 H., 1512 A.D.), which, according to *Riyāẓ*, was the *dākhil-i-kalan* or the main gateway, *viz.*, the present Dākhil darwāẓā of the citadel, the most splendid gateway existing in East India.[1] Furthermore, another gateway was erected in his reign (*vide* an inscription reported by Francklin, dated 22nd Maḥarram 909 H., 17th July 1503 A.D.); while the elegant Chotā Sonā Masjid of Fīrozpur suburb was built by his officer Wālī Muḥammad, Majlis-ul-Majālis Mansūr.

Husẹn Shāh, 899—925 H.

Husẹn Shāh was succeeded by his son Nāṣiru-d-dīn Naṣrat Shāh, called in histories Naṣīb Shāh. It is not clear when he ascended the throne. Several of his coins bear dates 922 to 925 H.; but some of Husẹn Shāh's coins are dated 922 H., and at least five inscriptions of his are dated 922 H., 923 H., 925 H., and 15th Sha'bān 925 H. (12th August, 1519 A.D.).[2] No inscriptions of Naṣrat Shāh go back, however, beyond 926 H.; while the mints on his early coins, where legible, are named Khalifatābād, Fathābād, and Naṣratābād, that is, places which were not the capital. Either the prince rebelled in these years, or what is more probable, having been in charge of south-east Bengal was suffered to issue coins in his own name. It appears, therefore, safer to put his accession year in 926 H. (1519-20 A.D.).

Naṣrat Shāh, 926—939 H.

Nasrat Shāh, if not as able as his father, held a no less splendid court, and was spoken of by Bābar as one of the five powerful Sulṭāns of India.[3] He built in 932 H. (1525 A.D.) the Baṛa Sonā Masjid, a massive mosque with a grand corridor 150 ft. long; and put up in 937 H. (1530 A.D.) the pure dais and the sacred stone of the Kadam Rasūl mosque. The *Bād-*

[1] J.A.S.B., 1895, p. 221; *Riyāẓ*, transl., p. 130, where "the large gateway" is to be separated from "Kadam Rasūl building." I have consulted Mr. Salam who considers this preferable. Most of the inscriptions of Husẹn Shāh referred to are gathered in *Gaur*, and J.A.S.B., 1872-74.

[2] For coins of Naṣrat 922 to 925 H., J.A.S B.. 1873, p. 297, 1874, p. 309, P.A.S.B., 1891, p. 134, 1893, p. 6, 1897, p. 11, 1898, p. 171, 1904, p. 233, I.M.C., ii, 176 178, Nos. 202, 204-207, 211-213, 215, B.M.C., p. 51, No. 139. Coins of Husẹn Shāh, 922 H., P.A.S.B., 1898, p. 170, I M C., ii, p. 173, No. 178; and for his inscriptions of 925 H. at Gauṛ, J.A.S.B., 1871, p. 256, and Sunārgāon, 1873, p. 295 (the others being from Birbhum, Dhamrāi near Dacca, and Bholāhāṭ in Māldā).

[3] Elliot, iv, p. 260.

sh̄āh kī ḳabr north of the palace, if it really contained the tomb of Husen Shāh, would have been built by Naṣrat who was also buried there according to tradition.[1] In his reign a Jāmi mosque was erected by one Majlis Sa'd (inscription dated 933 H., 1527 A.D.).

Fīroz Shāh III, 939 H.

The latest inscription of Naṣrat is dated 938 H., and the latest coins 939 H. (1532 A.D.).[2] In the latter year his son 'Alāu-d-dīn Fīroz Shāh (III) succeeded him, his coins being of 939 H., and the only existing inscription of his reign at Kālnā, Bardwān, being dated 1st Ramaẓān 939 H. (27th March, 1533 A.D.).[3]

Maḥmūd Shāh III, 939—945 H.

After a few months' rule he was murdered by his uncle who ascended the throne under the name Ghiyāṣu-d-dīn Maḥmūd Shāh (III). Maḥmūd's ordinary coins are from 939 H. to 945 H. (1533—1538 A.D.); but a few have been found dated 933 H. (1527 A.D.), with mints Khalifābād, Fathābād, and Naṣratābād.[4] They were the very same mints from which Naṣrat had issued coins during his father's coin-period, and presumably the same remarks will apply to these rupees of Maḥmūd. The Portuguese writer Correa represents him as very uxorious with ten thousand women in his harem. It is not therefore to be wondered at that, in spite of his large army and great resources, he went down before his able and ambitious subordinate Sher Khān, whose general Khawās Khān besieged Gauṛ and captured it. Maḥmūd escaped and went to Humāyun to ask for help, but being coldly received died soon after in 1538 A.D. before the rains. The Janjan Miyān's mosque in the northern suburb was built by a lady during his reign (inscription dated 941 H., 1534 A.D).

During the rule of Huṣeni dynasty, the city attained its greatest splendour. The Portuguese visited the city first in the reign of Maḥmūd III. Their accounts, as reproduced by De Barros (iv. ix, cap. 1), indicate a populousness and magnificence truly remarkable for the age:—

"The chief city of the kingdom is called Gouro. It is situated on the banks of the Ganges, and is said to be three of our leagues in length, and to contain 200,000 inhabitants. On the one side it has the river for its defence, and on the land

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[1] Creighton, *The Ruins of Gaur*, No. VIII (with a sketch of the front); Francklin, *Gaur*, p. 24, note, and J.A.S.B., 1894, pp. 90-1; Buchanan, *Eastern India*, iii, p. 76.

[2] For inscription of 938 H., J.A.S.B., 1874, p. 308; for coins of 939 H., P.A.S.B., 1898, p. 171.

[3] For Fīroz's coins, J.A.S.B., 1846, p. 333, 1873, p. 298, I.M.C., ii, p. 179, Nos. 220-1; for inscription, J.A.S.B., 1872, pp. 331-2.

[4] For Maḥmūd's coins of 933 H., P.A.S.B., 1893, p. 6, 1898, p. 172, I.M.C., ii, p. 179, No. 222; of 939 H., J.A.S.B., 1874, p. 309, P.A.S.B., 1898, p. 172, No. 224; of 945 H., P.A.S.B., 1898, p. 172.

ward faces a wall of great height. The streets are so thronged with the concourse and traffic of people . . . . that they cannot force their way past. A great part of the houses of this city are stately and well-wrought buildings.''

De Barros calls the city Gauṛ, after the name of the country. It is curious to find that the old name of the city, Lakhnautī, disappeared altogether, surviving only in the *sarkār*. In the coins Lakhnautī was replaced by the words *Khazānah* (the treasury) or *dāru-l-ẓarb* (the mint). In addition the following mint-places appear :—

Mints.

Maḥmūd Shāh (I)—Mu'aẓẓamābād, Caṭgāon, Maḥmūdābād, Fathābād, Naṣratābād ;
Bārbak Shāh—Jannatābād (?) ;
Fath Shāh—Fathābād, Muḥammadābād ;
Fīroẓ Shāh (II)—Fathābād ;
Muẓaffar Shāh—Bārbakābād ;
Husen Shāh—Huṣenābād, Fathābād, Jannatābād, Muẓaffarābād, Mu'aẓẓamābād, Muḥammadābād ;
Naṣrat Shāh—(besides the three in his early coins), Huṣenābād, Fathābād, Khalifatābād, Naṣratābād, Muḥammadābād ;
Fīroz Shāh (III)—Huṣenābād ; and
Maḥmūd Shāh (III)—(besides the three in his coins of 933 H.) Huṣenābād, Khalifatābād, Naṣratābād, Muḥammadābād and probably Fathābād.

The majority of these names appear in the *Aīn* as *sarkārs*, *e.g.*, Maḥmūdābād or Muḥammadābād, Khalifatābād, and Fathābād in the delta of south-east Bengal, Caṭgāon in the extreme south-east, and Bārbakābād north of the Padmā branch. The same list of the *Aīn* also mentions the towns of Fathābād, Caṭgāon, Bārbakābād, and the suburban tract of Khalifatābād. Mu'aẓẓamābād, mentioned, too, in inscriptions,[1] lay in east Bengal, and probably included *sarkārs* Bāzuhā and Sūnārgāon of the *Aīn*. Jannatābād appears in the *Aīn* as a title of *sarkār* Lakhnautī, given by the emperor Humāyūn. But the mint is much older, and is evidently the name of some other place. In the *Brahmāṇḍa* section of the *Bhaviṣyat-Purāṇa* Janahābād is mentioned distinct from Gauṛ.[2] One Huṣenābād appears as a *maḥal* of *sarkār* Lakhnautī, and a Husainpur close to the ruins of Gauṛ survived in Rennell's time (see sketch map). It is interesting to note that most of these mint-places are named after reigning Sulṭāns; but Naṣratābād could not have been named after the son of Huṣen Shāh, as it appears in coins of Maḥmūd I.

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[1] See the inscription of Sunārgāon, dated 889 H., J.A.S.B., 1873, p. 286, and of Silhaṭ, dated 911 H., *ibid.*, p. 294.

[2] Ind. Ant., xx, pp. 419, 421.

Afghāns.—In 945 H., Humāyūn invaded Bengal and occupied the city when Sher Shāh had left it after removing all his valuables. He came to like the city, changed its name to Jannatābād (paradise), and stopped there in pleasure and dissipation for three months (four months according to *Makhzan-i-Afghāni*). At length stirred by the success of Mirzā Hindāl at Agra and of Sher Khān at Benares, he marched from Gauṛ leaving Jahāngīr Ḳuli Beg in charge. But he was defeated near Causā in 946 H. by Sher Shāh, who sent his son Jalāl against Gauṛ. Jahāngīr Ḳuli Beg was defeated and slain, after which Sher Shāh appointed Khizr Khān Bairak as the first governor. Noticing certain signs of insubordination, Sher Shāh himself proceeded to Bengal in 945 H. (1541 A.D.), and after putting Khizr in chains divided Bengal into several provinces with Kāẓī Fazīlat or Fazīhat as amīr. On Sher's death in 952 H. (1545 A.D.), his son Islām Shāh reverted to the old system and appointed his kinsman Muḥammad Khān Sūr as governor. The coins of Sher and Islām as yet found have the mint names Satgāon and Sharifābād two *sarkārs* of west Bengal. Sher's coins of Sharifābād and Satgāon date from 946 H.[1]

Sher Shāh, 946—952 H.

Islām Shāh, 952—960 H.

When Islām Shāh died in 960 H. (1553 A.D.), Muḥammad Khān assumed independance under the title of Shamṣu-d-dīn Muḥammad Shāh Ghāẓi. His extant coins are dated 962 H., and bear the mint-names Satgāon, and Arākān,[2] the last signifying that he had conquered this kingdom in the extreme south-east. Muḥammad was defeated and slain by Himu, the Hindu general of Muḥammad 'Ādil Shāh of Delhi, in 963 H. (1555-6 A.D.). His son Khiẓr Khān then became Sulṭān as Ghiyāṣu-d-dīn Bahādūr Shāh, and attacking Muḥammad 'Ādil near Monghyr killed him in 964 H., in the second year of Akbar's reign (1557 A.D.). Bahādūr's coins go down to 968 H.[3] when he died and was succeeded by his brother Ghiyāṣu-d-dīn Jalāl Shāh, whose coins exist up to 970 H. (1562 A.D.).[4]

Muḥammad Shāh, 961—963 H.

Bahādur Shāh II, 963—968 H.

Jalāl Shāh, 968—970 (?) H.

[1] For Sher's coins of 946 H., *Chronicles*, p. 400, No. 351, J.A.S.B., 1904, p. 234, old I.M.C., p. 87, No. 13418, new I.M.C., ii, p. 88, No. 639, B.M.C., No. 526.

[2] For Satgāon coin, J.A.S.B., 1880, p. 84; for Arākān I.M.C., ii, p. 180, No. 229, and probably Marsden, quoted in J.A.S.B, 1875, p. 300, misread Arkāt.

[3] For Bahādur's coin of 968 H., J.A.S.B., 1875, p. 300, I.M.C., ii, p. 181, No. 233, Lah. M.C., p. 116. The Lahore Museum has got the only Bengal copper coin known, *viz.*, of this Sulṭān (p. 117).

[4] Jalāl's coin of 970 H., P.A.S.B., 1891, p. 134, I.M.C., ii, p. 181, No. 235.

The Kararāni brothers, Tāj and Sulaimān, grew more and more influential in Bihār, sometimes opposing Jalāl and sometimes in league with him. When Jalāl died, Tāj Khān slew his son and seized Gauṛ. This event took place in 971 H. (1563 A.D.). But if Khān Jahān, who became governor of Orissa in 982 H., had come over with the Kararāni family, then the city had been seized before Zūl-ḥijjah 970 H., in which month he erected a mosque gateway in Gauṛ.[1] Tāj.Khān died shortly after ; and Sulaimān became the sole ruler of Bengal and Bihār, probably before the end of 971 H. He removed the capital from Gauṛ to Tāṇḍa, apparently in an early year of his rule, say 972 H. (1565 A.D.).

Tāj Khān, 971 H.

IV. Temporary Occupations in the Mughal Period.

When Munim Khān Khānkhānān, the first Bengal Viceroy of Akbar, returned from Orissa in 983 H., he found that Afghān rebels from Ghoṛāghāṭ had driven out the Imperial troops and had occupied Gauṛ. Munim constructed a bridge over one branch of the river, and was proceeding to do the same over the other, when the Afghāns fled from the city.[2] Soon after, Munim ordered the soldiers and the rayats to remove from Tāṇḍa to Gauṛ, for which removal two reasons have been assigned, *viz.*, Gauṛ was on the side of the river nearer to Ghoṛāghāṭ, the seat of rebellion, and contained many handsome and convenient buildings.[3] The rains, however, brought on epidemics and numberless men died. On the completion of 10th Rajab (16th October, 1575 A.D.), the Viceroy himself fell a victim, and "all that rank and glory, and that grandeur and perfection became a mere dream and fantasy" (Badāoni). The headquarters were then hurriedly taken back to Tāṇḍa.

Mughal.

In 988 H. (1580 A.D.) when Bībā Khān and the Kākshāls started the great military revolt, they crossed over to Gauṛ and began to collect men. Here they were joined by 'Āsi Ma'sūm Kābulī who had revolted in Bihār ; and their combined forces crossing back the river marched against the governor Muẓaffar Khān in Tāṇḍa.[4] Gauṛ now appears to have been finally abandoned, as described in Ralph Fitch's Travels (1588 A.D.).

Nearly three quarters of a century after, prince Shāh Shuj'a appears to have been attracted to the place, and some traces of his occupation have survived. The prince is said to have repaired the east gate of the citadel; while Shāh Ni'matu-llah, whom the prince honoured much, settled in the

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1 For the inscription, *Ep. Ind.*, ii, 286.
2 *Akbarnāma*, Elliot, vi, p. 45.
3 *Akbarnāma*, Elliot, v, p. 394, note.
4 *Tab. Akb.*, Elliot, v, pp. 415-6; Badāoni, transl., ii, pp. 289-290.

southern suburbs of Fīrozpur and was buried there some time after 1075 H. (1669 A.D.). In 1071 H., an unnamed Shaikh was buried in the court of Ḳadam Rasūl mosque; near which Fath Khān, son of Diller Khān, a general sent against the prince by Aurangzeb, is said to have been buried. But it was only the last flickering gleam of a dying flame; and when William Hedges, the agent of the English East India Co. in Bengal, visited it on 16th May, 1683, he found the city had become a wilderness of ruins.[1]

Lakhan-or.

Lakhaṇ-or.

Besides Lakhaṇāwaṭī, the *Ṭabakāt-i-Nāṣiri* names in Bengal several other places, some of which appear important enough to deserve a somewhat detailed notice. One such town is Lakhan-or. In 602 H. (1205-6 A.D.) Muḥammad-i Bakht-yār despatched Muḥammad-i Sherān and his brother with a portion of his forces towards Lakhaṇ-or and Jājnagar. The western side of Lakhaṇāwaṭī was called Rāl, and the city of Lakhaṇ-or lay on that side. From Lakhaṇāwaṭī to the gate of the city of Lakhaṇ-or on one side, and as far as Dīw-koṭ, on the other side, Sulṭān Ghiyāṣū-d-dīn 'Iwaz had an embankment constructed extending about ten days' journey, for this reason, that in the rainy season the whole of that tract becomes inundated, and that route was filled with mud-swamps and morass; and if it were not for these dykes, it would have been impossible for people to carry out their intentions or reach various structures and inhabited places, except by boats. After the decease of Sulṭān I-yal-timish in 633 H., between the governor of Lakhaṇāwaṭī ('Izz-ud-dīn Tughril-i Tughān Khān) and the feudatory of Lakhaṇāwaṭī-Lakhaṇ-or (one I-bak, styled Aor Khān), a battle took place in the vicinity of Lakhaṇāwaṭī, in which Aor Khān was killed and both sides of the country of Lakhaṇāwaṭī came into the possession of Malik Tughril. In 642 H. the infidel army of Jājnagar coming beyond their frontier, first took Lakhaṇ-or, killing its feudatory Fakhr-ul-Mulk Karim-ud-dīn Lāghrī with a number of Musalmāns, and then appeared before the gate of Lakhaṇāwaṭī on Tuesday, the 13th Shawwal (14th March, 1245 A.D).[2]

Its identification.

From these details it appears that Lakhaṇ-or was an important fortified town with a feudatory of its own, that it lay towards Jājnagar territory in Rāṛh the western part of Lakhaṇāwaṭī country, and that it had to be connected with the capital by an embankment on account of mud-swamps and morasses. Hence the posi-

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[1] *Diary* of William Hedges, Yule, vol. i, p. 88.
[2] *Tabaḳāt-i Nāṣiri*, transl., pp. 573, 585, 586, 736-7, 739.

tion of the town should be sought for towards the south, and on the west of the Bhāgīrathī branch (in Rāṛh), at the same time not far from that river being in swampy lands. None of the places suggested, Nagor by Stewart, Lacarcoondah by Blochmann, and Kankjol by Cunningham, satisfies these conditions. Its identification is, in fact, next to impossible because the name disappeared from all subsequent histories, and the physical aspect of the locality changed enormously on account of fluctuation in the course of the Ganges. From the hint that the embankment was about ten days' journey or say 150 miles, and after deducting 65 miles, the distance of the Hindu city Devīkoṭ, Lakhaṇ-or would lie about 85 miles south of the capital. Its position, therefore, along the Bhāgīrathī branch would be somewhere above modern Murṣidābād. If one has to identify it with any of the existing sites, why not then with Ġhiasābād *alias* Badri-hāṭ? It is an old place, shown in Rennell's Atlas and has old remains, "the ruins of an ancient city extending for some miles inland," where have been found "carved stones, pillars, slabs with Pāli inscriptions, gold coins, and much broken pottery."[1] It now lies on the Āzimganj-Nalhāṭi line, west of the Bhāgīrathī branch within Lālbāgh subdivision: and careful explorations may throw some light.

Devī-koṭ.

In Musalman period.

Next to Lakhaṇāwaṭī, no place of Bengal was regarded more important in the *Tabakāt-i* than Dīwkoṭ. Here Muḥammad-i Bakẖtiyār died in 602 H., Sha'ban (began on 13th March, 1206 A.D.); here 'Alī-i-Mardān assumed government in 606 H. (1209-10 A.D.); and Huṣamu-d-dīn 'Iwaẓ was its feoffee before becoming Sulṭān. It formed the northernmost frontier town in Barind, as Lakẖaṇ-or was the southernmost; and for facility of communication both were connected with the capital by a high embankment during 'Iwaẓ's rule.[2] It had an old mosque built in the reign of Kaikāūs, *vide* an inscription dated 1st Muḥarram 697 H. (19th October, 1297 A.D.). It was intimately connected with the saint Maulanā Āṭā, in whose memory a tomb was completed by order of the Sulṭān Sikandar Shāh (inscription dated 765 H., 1363-4 A.D.), besides another mosque built in the reign of Muẓaffar Shāh (inscription dated 896 H., 1490-1 A.D.); and in front of whose door a second mosque with minaret was built in the reign of Huṣen Shāh (inscription dated 918 H., 1512-3 A.D.)[3] The town has now disappeared; but the name still

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[1] Report of Capt. W. S. Sherwill, dated 19th February, 1857, in the *Selections from Bengal Government Records*, no. xxix, p. 7.

[2] *Tabakāt-i Nāṣiri*, transl., pp. 572, 576, 578, 586.

[3] A.S.R., xv, pp. 98-100.

clings to a parganā, which in the survey of 1858-61[1] had an area of 41·44 sq. miles. The parganā is run through from north to south by the Pūrṇabhavā river, and is bounded in the south-west corner for a few miles by the Tāṅgan stream. As in the old days of 'Iwaẓ, so now it continues full of swamps and nallahs with several large marshes, as Mān, Siklā, Haripur, Kutamāi, and in consequence is very unhealthy. The parganā appears as a small *maḥal* in *sarkār* Lakhnautī of the *Aīn* under a distorted name, Dihi-koṭ (31,624 dāms).

In Hindu period.

In the Hindu period, too, it formed an important town. According to tradition the old fort near Dumdummā was the capital of Bāṇarājā; and this tradition is pretty old, for following it the lexicographer Hema-candra of the eleventh century makes Devī-koṭ a synonym of Bāṇa-pura. Furthermore a stone pillar, removed from this fort a few years ago to the garden of the Mahārājā of Dināpur, has an inscription of about the ninth century A.D., recording the erection of a Saiva temple by one Sidupati of the Kāmboja family.[2] Considering that some of the existing Hindu remains thus go back beyond the ninth century and that it was the traditionary capital of the king Bāṇa, whose exploits had assumed a legendary form in such a very old work as the *Hari-vaṁśa*, it is a question whether Devī-koṭ might not be the capital of the Puṇḍras so long sought for.

Puṇḍra capital.

Its position is, on the whole, not inconsistent with Yuan Chwang's description, at least more consistent than that of any other place as yet suggested. According to Yuan Chwang, it lay, after crossing a river, 600 li east from *Ki-shu-ho-kie-lo* or *kie-chu-wen-ka'g-lo* (Kajaṅgala ?); and at a distance from it eastward for 900 li, after crossing a river, lay *Ka-mo-lu-p'o* (Kāma-rūpa); and from it south-east after another 900 li or so lay *Kie-lo-na-su-fa-la-na* (Karṇa-suvarṇa).[3] The directions are to be taken evidently in a general way, for in another Chinese work, *T'an-shu*, Kajaṅgala is described as being 400 li south-west from *Pun-na-fa-tan-na*, lying in the east of Mid-India and on the south of the Ganges.[4]

Ūmurdan.

Ūmurdan.

Ikhtiyāru-d-dīn Yūzbak-i Tughril Khān of Bengal fought thrice with the forces of Jājnagar and with varying successes. The following year he marched into the territory of Ūmurdan *alias* Ūrmurdan or Aẓmurdan, and unexpectedly reaching the capital of the same

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[1] Sherwill's Survey *Report of the Dinagepore District*, 1863, pp. 41-2.
[2] Arch. Sur. Ben. Cir., 1900-1, p. vii.
[3] *Records*, Beal, ii, pp. 184, 185, Watters, ii, 184, 185, *Life*, Beal, p. 131.
[4] Watters, ii, p. 185.

name forced its Rae to retire; while the whole of his family, dependants and followers with his wealth and elephants fell into the hands of the Musalmān forces.[1]

Identifiable with Mandāran.

From the connection with the wars of Jājnagar, Ūmurdan appears to have been a part of it. The town and the territory I am inclined to identify with Mandāran (ū + mandāran). The tract of Mandār was conquered by the Orissan king Cōṛgaṅga, according to inscriptions; and it was called Mandāran, evidently from *Mandār + avani*, the country of Mandār, and is so derived in the *Bhaviṣyat-Purāṇa*.[2] Its chief town, the fort of Mandārān, formed the traditionary head-quarter of Ismā'īl Ghāẓī, general of Huṣen Shāh, and contains a tomb erected in his memory. Madāran formed a large *sarkār* in the *Aīn*, occupying the whole of the western border of Bengal; and during the Gaṅga rule it evidently formed the frontier province of north Orissa.

Jājnagar.

In the *Tabaḳāt-i*, Jājnagar always means Orissa, probably north Orissa. The name is derived from Jājpur town on the bank of the Vaitaranī river, an old head-quarter of north Orissa. Curiously enough in a late Oṛiyā poem, *Premakaṭā* of the fourth quarter of the eighteenth century, Jājpur is distinctly named as Jājnagra.[3] The Jājnagar of Barnī, lying towards Sunārgāon,[4] may be another place, evidently a corruption of Jahāj-nagar or city of boats or ships.[5] We have still Jehāj-ghāṭā in Howrah.

Pāṇḍuā, Fīroẓābād.

Pāṇḍuā, capital.

The capital was transferred from Lakhnautī to Pāṇḍuā, not merely because the former had become uninhabitable from the diversions of the river, but also because the latter had considerable facility of water communications. At present the river Mahānandā flows four to six miles west of the road passing through the town; in Rennell's time, it flowed, if correctly shown, at least a mile nearer. The first three or four miles of the road from old Māldā are heavy, being low and sandy with depressions on the west, while several villages have names signifying water-connexion, *e.g.*, Murlighāt. All these facts indicate that in the palmy days of the city, the river flowed close to it, thus enabling the numerous long basalt slabs of Ādinā and other mosques to be easily transported by water from the Rājmahal hills.

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1 *Tabaḳāt-i Nāṣiri*, p. 763.
2 Ind. Ant., xx, p. 420.
3 J.A.S.B., 1898, p. 374.
4 Barnī, Elliot, iii, p. 116.
5 A tradition still calls Tippera *Jahāz-nagar*, J.A.S.B., 1874, p. 83, note.

And a sacred city.

For nearly a century and a quarter (739—860 H.) Pāṇḍuā superseded Lakẖnautī, rivalling it in populousness and magnificence while surpassing it in sanctity. As capital, its pre-eminence is connected chiefly with two dynasties, that of Ilyās Sẖāh and that of Gaṇeśa. But unlike Gauṛ, Pāṇḍuā did not lapse into wilderness on the removal of the seat of government. Edifices continued to be erected here in later times so far down as Aurangzeb's rule: while the existing remains owe their preservation largely to connection with the holy saints. In *Riyāẓ* the town is called the holy Pāṇḍuā and is described as a centre of much pilgrimage; while even now it is known as Ḥaẓrat Pāṇḍuā to distinguish it from the southern Pāṇḍuā in Huglī district.

I. The Dynasty of Ilyās Sẖāh.

Ilyās Sẖāh, 740—758 H.

Sẖamṣu-d-dīn Ilyās Sẖāh, though nicknamed *Bhaṅgerah* (*bhāṅg* or hemp-eater), was not wanting in ability. According to histories, he was a nobleman in the court of 'Alī Sẖāh; and apparently taking advantage of the civil war between the latter and Fakhru-d-dīn of Sunārgāon, became independent. This event took place about 740 H. (1339 A.D.), the date on his earliest extant coins. After a break, his coinage runs through the years 744, 745 and 746 H. (1343-45 A.D.) with the same mint Fīrozābād.[1] Alī Sẖāh's coins also range from 742 to 746 H., with also the very same mint Fīrozābād.[2] It is clear, therefore, that during these years the two rival Sultāns fought with each other in this territory, until Ilyās Sẖāh succeeded in killing his opponent probably in 746 H. (1345-6 A.D.). Ibn Baṭūṭah who visited East Bengal in 745 or 746 H., mentions 'Alī Sẖāh as living, but curiously enough, does not mention Ilyās Sẖāh.

His conquest of Sunārgāon.

The important events in Ilyās Sẖāh's rule are his conquest of Sunārgāon and his fight with the Delhi Sulṭan Fîroz Sẖāh. Regarding the conquest, the facts given by Sẖamṣ-i Sirāj 'Afīf do not agree in several points with the conclusions deducible from coins. According to 'Afīf, after the return of Fīroz from his first invasion of Bengal (754-5 H.),[3] Sẖamṣu-d-dīn invaded Sunārgāon, captured and killed Fakẖru-d-

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[1] Ilyās' coin of 740 H., J.R.A.S., ii, p. 206; cf. 744-6 H., *ibid.*, and P.A.S.B., 1883, p. 59 (745 H.).

[2] For 'Ali's coins. J.R.A.S., ii, p. 202; I.M.C., ii, p. 150, No. 22 (743 H.), No. 23 (744 H.), cf. J.A.S.B., 1907, pp. 587-8.

[3] Fīroz Sẖāh left Delhi on 10th Sẖawwal 754 H. (8th November 1353 A.D.), and returned to it on 12th Sẖa'ban 755 H. (1st September 1355 A.D.), Barnī l.c., *Riyāẓ's* transl., pp 100-1, footnote. According to *Tabaḳāt-i-Akbari* the actual invasion lasted from 10th Sẖawwal 754 H. to 11th Rabi-ul-awwal 755 H. (5th April 1355 A.D.).

dīn, seized his territory on which Fakhru-d-dīn's son-in-law Ẓafar Khān fled, and after much wandering took refuge with Sulṭān Fīroz, and that this led to Fīroz's second invasion of Bengal in 760 H.[1] The coins show, however, that Fakhru-d-dīn reigned in Sunārgāon up to 750 H., that from 751 to 753 H. One Ikhtiyāru-d-dīn Ghāẓi Shāh was in possession, calling himself son of a Sulṭān (? Fakhru-d-dīn), and that the extant coins of Ilyās Shāh with the mint Sunārgāon run from 753 H. downwards.[2] According to the coins, therefore, Ilyās Shāh had conquered Sunārgāon in 753 H., before Sulṭān Fīroz's first invasion, and had conquered it evidently from Ikhtiyāru-d-dīn and not from Fakhru-d-dīn.

His works.

The coins of Ilyās Shāh show three mints, Fīrozābād, Sunārgāon (from 753 H.), and *Shaḥr-i-nau* (74*, 754 H.). In some coins Fīrozābād is called distinctly "the capital"; and in other coins Sūnārgāon is entitled *Ḥaẓrat Jalāl*.[3] I have already identified *Shāḥr-i-nau* with Fīrozābād, and would only add that the name seems to be borrowed from Delhi where Kīlugharī in its neighbourhood was similarly called the new city in the time of Sulṭān Jalāl-ud-dīn Fīroz Shāh Khalji. No public works authentically traceable to Ilyās Shāh have yet been found, not even an inscription. According to *Riyāẓ*, he built in this town (before Fīroz's first invasion) a bath similar to the Shamsī bath of Delhi.[4] This might be the same whose remains have been found in Sataisghar, a mile east of Ādinā mosque, *viz.*, a tank and an octagonal room with a small room on each side, from one of which a passage runs to another large oblong room besides other rooms.

Sikandar Shāh, 758-792 H.

Sikandar Shāh, the only Sulṭān without any surname, succeeded, but in which year it is not clear. His father's coins exist up to 758 H.; while another set of coins in the name of Sikandar Shāh have been found, from 750 to 754, 758 and 759 H. with Fīrozābād, and 756 to 759 H. with Sunārgāon mint.[5] It would thus appear that the prince was in rebellion

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1 Elliot, iii, pp. 303-5, l.c., *Riyāz*. p. 104, footnote 1.

2 Fakhrā's coin of 750 H., J.R.A.S., ii, p. 201, and of 749 H., *ibid.*, and I.M.C., ii, p. 149, No. 20; Ikhtiyār's coins of 751-3 H., J.R.A.S., ii, p. 204, J.A.S.B., 1873, p. 254 (753 H.), I.M.C., ii, p. 149, No. 21 (751 H.). For Ilyas' coin of Sunārgāon, dated 753 H., J.R.A.S., ii, p. 207.

3 For coins of "the capital," I.M.C., ii, p. 151, Nos. 28 and 29; for coins of *ḥazrat jalāl* (the seat of majesty), P.S.A.B., 1894, p. 65; for *Shaḥr-i-nau* coins, *ibid.*, and I.M.C., ii, p. 152, Nos. 35 and 36.

4 *Riyāz*, p. 100. The *ḥauẓ-i-Shamsī*, a famous sight of old Delhi, was built by I-yal-timish, and repaired by Sulṭān Fīroz (Elliot, iii, p. 383). Its praises were sung by that remarkably versatile poet Amīr Khusrū in his *Kirānu-s-sa'dain* (Elliot, iii, p. 525).

5 For Ilyās' coin of 758 H., J.R.A.S., ii, pp. 206, 207, I.M.C., ii,

at least during the earlier years. According to histories, in 758 H. Ilyās Shāh sent an embassy to Delhi with presents; and the return embassy of the emperor Fīroz heard of the death of Ilyās in Bihār and went back.[1] Furthermore, certain coins of Sikandar dated 759 H. bear the mint name, Cāwalistān 'urf Kāmrū,[2] thus indicating that they had been struck in commemoration of Sikandar's invasion of Kāmrū. It seems more likely that Sikandar would have struck these coins as the reigning Sulṭān, an invasion of the infidel territory being among the very early acts that a pious king could do on accession. On the present data, therefore, Sikandar's accession may be put in the latter part of 758 H. (1357 A.D.).

His works.

Sikandar's coins show the mints Fīrozābād, Sunārgāon and *Shahr-i-nau*, the three mints of his father, with Satgāon and Mu'aẓẓamābad two tracts lying on the east and west side of Bengal. They thus indicate that nearly the whole of Bengal had come under his rule. His name is, however, remembered by posterity as the builder of Ādinā mosque, the largest and the most magnificent in Eastern India, "looked upon by the Bengalis as one of the wonders of the world" (Cunningham). The date in its inscription has been read variously as 704, 766, 770 and 776 H. Rajab, of which the last seems the most likely (this Rajab beginning on 6th December, 1374 A.D.). About the inscriptions of the mosque Blochmann remarked: "The characters are beautiful, and the rubbings have created sensation wherever I have shown them." Not improbably they came from the hands of "the slave of the throne, Ghiās, the golden-handed," to whom is due the very fine Tughra inscription in Sikandar's tomb of Maulanā Āṭā in Devī-kot (765 H.).

A'ẓam Shāh, 792-814 H.

Next came his son Ghiyāṣ-ud-dīn A'ẓam Shāh. His coins are spread over a fairly long period, and may be roughly divided into three batches. The first batch from 772 to 781 H. has only one mint Mu'aẓẓamābād, and might have been issued when in rebellion in East Bengal, which *Riyāẓ* has described.[3] The next batch from 788 to 799 H. has various mints (Fīrozābād, Satgāon, Mu'aẓẓamābād, Jannatābād), and partly overlap his father's coin-period from 788 to 792 H. In one rupee of 788 H. Fīrozābād is called "the capital."[4] It is

p. 151, Nos. 29, 31 (*b*). For coins of Sikandar, Fīrozābād, 750-759 H., J.R.A.S., ii, pp, 211-2, 213, P.A.S.B., 1883, p. 60 (758 and -9 H., *baldat*), I.M.C., ii, p. 152, No. 37; of Sunārgāon, J.R.A.S., ii, pp. 112, 213, P.A.S.B., 1883, p. 60, (*ḥaẓrat jalāl*), I.M.C., ii, pp. 153, 156, Nos. 39, 63, 64.

[1] J.A.S.B., 1873, p. 255.
[2] P.A.S.B., 1883, p. 60, I.M.C., ii, p. 152, No. 38.
[3] J.R.A.S., ii, pp. 218, 219; *Riyāz*, pp. 106-8.
[4] Sikandar's coins of 788-792 H., J.R.A.S., ii, pp. 214, 215-16;

possible that the earlier coins of the second batch might have been issued jointly with his father who on account of old age or other reasons might have recognised his practical independence. In this period very likely fell the incident of his invitation to the famous poet Hāfiz and the poet's reply in verse (the poet dying in 791 H.). From 792 H. (1390 A.D.) down to 799 H. (1396-7 A.D), he appears to have been clearly the sole Sulṭān of Bengal.

His Coinage.

Lastly, stray coins of A'ẓam are found dated 810 to 813 H. (1407—1410 A.D.); while parallel with them appear coins of Shihābu-d-dīn Bāyaẓid Shāh dated 812 H. (one date read doubtfully as 809 H.).[1] The latter would seem to have been issued in rebellion, for the Chinese annals leave no doubts as to Ghiyāsu-d-dīn's living up to 814 H. The *Ming-shih* or history of the Ming dynasty says that *Ai-ya-see-ting*, the king of *Pang-kola*, sent to the Chinese court in 1408 an embassy with presents including horses and saddles, gold and silver ornaments, drinking vessels of white porcelain with azure flowers and many other things; and that in 1409, the same king, spelt *Gai-ya-szu-ting*, sent another embassy to China. In 1412 A.D. (814-5 H.), the Chinese ambassadors of the return embassy met Indian envoys bringing the usual presents, and learnt from them that the king had been dead and had been succeeded by *Sai-futing*.[2] The coinage is thus supported by the Chinese accounts.

The coinage calls for some remarks. A new mint appears in Jannatābād, its earliest being dated 790 H. (1388 A.D.).[3] This place has not yet been identified, but can hardly be Lakhnautī to which the title was given much later by the Emperor Humāyūn (see *supra*, p. 212). A notable fact is the entire disappearance of Sunārgāon as mint. This town, that appeared so frequently in the previous reigns, sometimes under the highly honorific title of *ḥaẓrat jalāl*, is not even mentioned in A'ẓam's coins, whose early rupees are all from Mu'aẓẓamābād, in some called "the city." The omission is more remarkable if the general tradition be true that A'ẓam himself lies buried in a tomb at Sunārgāon, still pointed out. The removal of the seat of government from Sunārgāon must be largely connected with that great cause of physical changes in Lower Bengal, the diversions

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A'ẓam's coins of 788-792 H., J.R.A.S.. ii, pp. 219,220, P.A.S.B., 1893, pp. 91, 144, I.M.C., ii, pp. 157, 159, Nos. 70 ("the capital," 788 H.), 71, 80, 81.

[1] For A'zam's coins of 810-3 H., P.A.S.B., 1874. p. 158, 1893, p. 142, 1898, pp. 165, 169, B.M.C.; for Shihāb's coins of 812 H., J.A.S.B., 1873, p. 263, 1883, p. 217 (? 809 H.), P.A.S.B., 1893, p. 144, I.M.C., ii, p. 160, No. 89, B.M.C., p. 29, No. 67.

[2] Pauthier, l.c., A.S.R., xv, pp. 173-4; J.R.A.S., 1895, p. 533, 1896, p. 204.

[3] J.R.A.S., ii, p. 219 (790 H.), I.M.C., ii, p. 158, Nos. 76 (* 9*) and 77 (79 * H.), B.M.C., p. 24, No. 52.

of river-courses. The town, however, did not die out altogether. In the accounts of the Chinese traveller Ma-huan, who had left China in the sixth month of 1405 A.D., *Sona-urh-kong* (Sonārgāon) appears as a port of *Pang-ko-la* (Bāṅgāla); and among the terms of the treaty concluded between 'Isā Khān of Bhāti and Shāhbāz Khān, the military governor of Bengal in the 29th year of Akbar's reign, was one that the port of Sunārgāon was to receive an Imperial *Dārogha*.[1] *Shahr-i-nau* with the latest date of 781 H. in Sikandar's reign[2] also disappeared from A'zam's coinage.

Ḥamza Shāh, 814-817 H.

After A'ẓam Shāh came his son Saifu-d-dīn Ḥamza Shāh. The histories differ as to the years of his reign, the earlier ones (*Tabakāt-i-Akbari*, *Aīn*, and Firishta's) giving him ten years and *Riyāẓ* three years seven months and five days. His known coins belong to 814 H. with the mint Fīrozābād, where legible.[3] According to Chinese annals he sent an embassy to the Chinese Emperor with a letter written in a gold leaf and presenting a giraffe. This embassy arrived in China in the twelfth year of Yung-lo, 1415 A.D. (817-8 H.). In this year, also, a Chinese embassy under Prince Tsi-chao, with presents, were received by the Bengal king, his queen and ministers.[4] The coins with the Chinese history thus give Saifu-d-dīn a reign from 814 to at least 817 H.

Bāyaẓid Shāh, 812-817 H.

Shihābu-d-dīn Bāyaẓid Shāh, who had been in rebellion in A'ẓam's time (*vide* his coins of 812 H.) apparently continued in rebellion, for coins of his are found dated 814 to 817 H. (1411-1414 A.D.), with the mint Fīrozābād, where legible.[5] It is not clear who survived. In the histories Shihābu-d-dīn (the name also appears as Shamṣu-d-dīn) is placed *after* Saifu-d-dīn, with a reign of three years and some months according to the *Aīn*, three years according to Firishta, and three years four months and six days according to *Riyāẓ*. So much seems established, that both Shihābu-d-dīn and Saifu-d-dīn were living in 817 H.

The coins of these two Sulṭāns reveal one peculiarity. In them the dates began to be shown in *figures* and not words, Shihābu-d-dīn's coin of 812 H. being the earliest. In Delhi

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[1] J.R.A.S., 1895, p. 529, cf. p. 523; Elliot, vi, p. 76.

[2] J.R.A.S., ii, p. 216.

[3] J.A.S.B., 1873, p. 259 (* * 4 H.), P.A.S.B., 1893, pp. 141, 142, I.M.C., ii, p. 160, No. 88, cf. Marsden, pl. xxxvii, No. dccliv, and I.M.C., ii, p. 160, No. 87 (date lost).

[4] J.R.A.S., 1895, p. 533, 1896, p. 204; Pauthier, l.c., A.S.R., xv, p. 174.

[5] For Shihāb's coins of 814 H., P.A.S.B., 1898, p. 165; of 816 H., J.A.S.B., 1873, p. 263, P.A.S.B., 1893, p. 141, 1898, p. 165, I.M.C., ii, p. 161, No. 91; of 817 H., I.M.C., ii, p. 160, No. 90, and p. 161, No. 92.

coins, however, the date years had been put in figures so far back as the reign of 'Alāu-d-dīn Muḥammad Shāh (II), one billion coin of his showing in Nāgri numerals 700, and another showing in Arabic numerals 701 (H.).[1]

II. The Dynasty of Gaṇeśa.

Rājā Gaṇeśa, 817-824 H ?.

No event in Bengal history is more remarkable than the intrusion of this Hindu king in the otherwise complete succession of Musalman governors. In spite of two centuries of Islamic domination, one is truly surprised to find a Hindu Rājā again in Gauṛ; and nothing would have been more welcome than a narration of the facts leading up to this revolution.[2] But an unusually thick darkness veils this chapter from our eyes; no coins or inscriptions of his time have been found, and no contemporary account, either Hindu or Musalman, exists.

Mode of Accession.

The later Musalman histories call him Kāns, and give him a rule of seven years, but do not agree about the facts of his accession. The *Tabakāt-i* and Firishta say that on the death of Shamṣu-d-dīn, Kāns usurped the throne; the *Aīn* remarks that a native of Bengal by name Kānsi fraudfully dispossessed Shamṣu-d-dīn; while according to *Riyāz* the true account is that Rājā Kāns who was zamindār of Bathuriah attacking Shamṣu-d-dīn, slew him and usurped the throne. The last version seems to be from local traditions, and practically agrees with the only Hindu account known, *viz.*, in the *Advaita-prakāśa*, a life of the Vaiṣṇava saint Advaita, the well-known colleague of Caitanya. In this life, composed about 1490 śaka (1568-9 A.D.), and therefore earlier than the above Musalman histories, it is related that following the counsel of Advaita s grandfather, Narasiṁha Nāṛiāl of Lāuṛ (Silhaṭ), Rājā Gaṇeśa killed the *Bādṣāh* of Gauṛ (name not given), and became king therein.[3] I have called the king Gaṇeśa, and not Kāns, because the Beṅgali book would know the Hindu king's name more correctly than the later Musalman annals.

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[1] I.M.C., ii, p. 42, No. 227, and p. 41, No. 219.

[2] This Hindu revival was a far-reaching movement, see my article on *Beṅgali Temples*, J.A.S.B., 1909, pp. 149-150.

[3] The passage is quoted below in *extenso* :—

Yeṁi Narasiṁha Nāṛiāl vali khyāta ।
Siddha śrotriya (?ā) khya Āru-Ojhār vaṁśa-jāta ॥
Yeyi Narasiṁher yaśaḥ ghoṣe tribhuvan ।
Sarvva śāstre supaṇḍit ati vicakṣaṇ ।
Yāhār mantraṇā-vale śrī-Gaṇeśa rājā
Gauṛiyā Bādṣāhe māri Gauṛe haila rājā ॥
Yār kanyā vivāhe hay Kāper utpatti ।
Lāuṛ pradeśe hay yāhār vasati ।

Printed edition, *Adhyāya* i, p. 3. The date of composition of the work, 1490 śaka, is given in *Adhyāya* xxii, p. 258.

His time.

We have seen that Shihābu-d-dīn and Saifu-d-dīn were living in 817 H., while from that year also begin coins with the name of Jalālu-d-dīn Muḥammad Shāh, who is recognised as the son of Rājā Gaṇeśa. Where then should Gaṇeśa's rule be placed? Blochmann suggested that Kāns probably ruled from 810 to 817 H. through Shihābu d-dīn *alias* Shamṣu-d-dīn as a puppet king, coining money in the latter's name.[1] This does not agree with the histories in which Kāns is said to have usurped the throne *after* Shamṣu-d-dīn's death; these histories are, however, often incorrect for this period. The traditions given in *Riyāẓ* were gathered evidently locally, probably from trustees or officers of the estate of the saint Nūr Ḳuṭb-ul-'Alam, and thus may have some substratum of historical truth in them. According to them, the saint invited to Bengal Sulṭān Ibrāhim of Jaunpur, on which the latter invaded it with a powerful army. Kāns besought the saint for help, and under his order brought to him his son Jadu, then 12 years old. The saint converted Jadu to Islām, had him proclaimed as Sulṭan under the name Jalālu-d-dīn, and interceding with Ibrāhim made him withdraw. Kāns, hearing of Ibrahim's death(?), displaced Jalālu-d-dīn and began to oppress Musalmāns. He imprisoned the saint's son and nephew Shaikhs Anwār and Zāhid, banished them to Sunārgāon and there had Anwār killed.[2] Though it is not expressly stated, the indirect inference seems to be that these events occurred after the death of the saint in Zūl-ḳa'dá 818 H. Therefore so far as these traditions go, it would appear that Rājā Gaṇeśa ruled through his minor son Jalālu-d-dīn, that he lived for some time after 818 H., and that therefore the earlier coins of Jalālu-d-dīn, and not those of Shihābu-d-dīn, might have been issued by the Hindu king *benāmi*.

Muhammad Shāh, 817–834 H.

Jalālu-d-dīn's coins range from 817 H. to 834 H. (1415-1430 A.D.) and are from various mints, Fīrozābād, Satgāon, Fathābād, Mu'aẓẓamābad and Caṭgāon.[3] The mint places make it clear that the whole of Bengal even up to Caṭgāon had come under his rule, probably the result of his father's vigorous activity. The coins declare him to be a zealous Musalman, for the kalimah that had disappeared from Bengal coins for nearly two centuries, was re-introduced, while the names of the four Khalifs (*cār-yārs*) begun from the time of Sikandar were continued. Tughra characters on the reverse or on both sides appear in several of the coins. Sanskrit

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[1] J.A.S.B., 1873, pp. 262-3.

[2] *Riyāẓ*, pp. 114-117.

[3] Jalālu-d-dīn's coins of 817 H., P.A.S.B., 1893, p. 142; of 818 H., J.A.S.B., 1873, p. 267, P.A S.B., 1874, p. 157, I.M.C., ii, p. 161, No. 93, p. 162, No. 102; of 834 H. (Caṭgāon), J.A.S.B., 1893, p. 230, I.M.C., ii, p. 163, Nos. 110, 108 (Fīrozābād).

learning was also not neglected. Bṛhaspati of Rāṛh entitled *Rāya-mukuṭa*, in his *Pada-candrikā*, a commentary on the famous lexicography of Amarasiṁha, wrote of his having got the title *Paṇḍita Sārvabhauma* from the king of Gaur.[1] Though he did not name the king, the date of the work, 1353 śaka, 4532 Kaliyuga (1431-2 A.D.), suggests Jalālu-d-dīn,[2] unless the epithet be hyperbolical for some petty chief.

Aḥmad Shāh, 835—842 H.

His son Shamṣu-d-dīn Aḥmad Shāh succeeded, either in 836 H. of which year his coins exist,[3] or the year before. Unfortunately no coins of his of any subsequent years have yet been brought to light and no inscriptions. The extant coins of his successor Nāṣiru-d-dīn Maḥmūd Shāh (I) begin from 842 H., mints Fīrozābād (?) and Ca'gāon.[4] Unless, therefore, a theory of rebellion is assumed, about which there is no allegation in the histories, Aḥmad's reign came to an end probably at that time, if not a little before. Two facts seem to support this view indirectly. Firstly, no embassy was sent to China from Bengal, between 1416-1437 A.D. (the two years inclusive), *i.e.*, during the entire rule of the dynasty of Gaṇeśa. It was resumed in 1438 A.D. (842 H.),[5] when A'zam's descendant Maḥmūd got the throne. Secondly in the *Matla'us-s-sa'dain* of Abdur-r-Rezak it is narrated that the king of Bengal complained of the invasion of Jaunpur Sulṭān, Ibrāhim, to the Persian king Shāh Rokh, and asked for help, upon which the latter despatched Karimu-d-dīn Abu-al Makārim Jāmi to Jaunpur with a rescript directing the ruler of that kingdom to refrain from interfering with Bengal or to be held responsible for the consequences thereof. This ambassador while returning home with an envoy of Bengal king was met in Kalikaṭ by the author in 845 H., some time after Ṣafar (*i.e.*, after 21st June, 1441 A.D.).[6] The custom of sending embassies to kings outside India does not appear to have been observed by any king of the dynasty of Gaṇeśa, and was appa-

[1] Introductory verses of this commentary, verses 5 to 8, Ānandarām Barooah's edition of the *Nāma-liṅg-ānuśāsana*, part i, p. 2. Verse 8 is quoted below (wanting in A.S.B.'s MS.) :—

Puṇyaṁ Paṇḍit-śārvabhauma-padavīṁ Gauḍ-āvanī-vāsavād
Yaḥ prāptaḥ prathito-Vṛhaspati-r-iti kṣmā-loka-vācaspatiḥ ।
Koṣasy-Āmara-nirmitasya vividha-vyākhyāna dīkṣā-guruḥ
Sānandaṁ Pada-cand ikāṁ sa kurute ṭīkām-imāṁ Kīrtaye ॥ 8 ॥

[2] The date appears in the notes under Text i, 4 (3 in some), 21, see A.S.B.'s MS., iii. C. 73, fol. 61a :—

Idānīṁ ca Śak-ābdāḥ ॥ 1353 ॥ dvātriṁśad-abd-ādhika-pañca-śato-ottara catuḥ-sahasra-varṣāṇi Kali-sandhyāyāṁ bhūtāni 4532 ।

[3] Aḥmad's coins of 836 H., Marsden, l.c., J.A.S.B., 1893, p. 268, 1846, p. 327.

[4] Maḥmūd's coins of 842 H. (Catgāon), P.A.S.B., 1893, p. 143, J.A.S.B., 1893, pp. 232-3 (one ? Firozābād).

[5] Pauthier, l.c., A.S.R., xv, p. 174.

[6] *India in the Fifteenth Century*, Major, p. 14, Elliot, iv, p. 99.

rently revived by Maḥmūd; while the invasion of Sultān Ibrāhim referred to must have taken place some time before his death in 844 H.,[1] and was probably prompted by the confusion created on account of a change in the royalty.

No works in Pāṇḍuā can be authentically ascribed to the dynasty of Gaṇeśa. According to the *Riyāẓ*, Jalālu-d-dīn, his wife and his son Aḥmad lie buried in this town under a tower, which common traditions identify with the splendid Eklākhi tomb. If so, the Eklākhi would have been completed in Aḥmad's time.

III. Subsequent Period.

Coins of Maḥmūd Shāh (I) with the mint Fīrozābād are found down to 857 and 858 H. (1453 and 1454 A.D.),[2] and therefore, the capital continued to be in this town through the greater part of his reign. After him Fīrozābād disappears as a mint, indicating that the capital had been transferred to Gauṛ, as mentioned in the histories. The causes leading to this change in the seat of government have been briefly discussed, *supra* p. 205, and appear to have been mainly physical and climatical. No edifices of this king in Pāṇḍuā have been yet found.

Fourteenth century.—Reilgious Activity of Islam in Bengal.

The transfer of the head-quarters took away, no doubt, the political importance of the place. But from the remains it appears that Pāṇḍuā did not lose its religious sanctity. In this connection it is worth while pointing out that the fourteenth century A.D. saw a remarkable activity of the Islamic fakirs in Bengal. Sunārgāon, which was flourishing in this century, swarmed with pīrs and fakirs, traditions giving the place 150 *gaddis* or seat of fakirs.[3] From this fact was evidently derived its title *ḥaẓrat-i-jalāl*; and the influx of the fakirs might have been brought on largely by the religious liberality of Sulṭān Fakhru-d-dīn (737-750 H.), whom the contemporaneous traveller Ibn Baṭūtah described as a "distinguished sovereign, loving the strangers, especially the fakirs and the Soufis."[4] In Huglī Paṇḍuā near Satgāon worked during this century Shāh Safiu-d-dīn, whose tomb still exists. Coming nearer, Buchanan remarked that in every part of Dīnājpur district (which in his time included Pāṇḍuā) were found tombs or monuments of the *pīrs*.[5] Old Devīkoṭ was graced by Maulanā

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[1] For Ibrāhim's coins of 844 H., I.M.C., ii, p. 211, No. 53; for his successor Maḥmūd Shāh's coins of 844 H., I.M.C., ii, pp. 212, 213, Nos. 60. 72 and 73.

[2] Fīrozābād coin of 857 H., P.A.S.B., 1893, p. 144; cf. 858 H., J.A.S.B., 1893, pp. 233-4.

[3] Wise, J.A.S.B., 1874, p. 85.

[4] French translation, iv, p. 212, Lee's transl., p. 195.

[5] *Eastern India*, ii, p. 621.

Ātā,[1] in whose honour a tomb was built by Sulṭān Sikandar in 765 H. Another Bengal saint, Shaikh Akhi Sirāju-d-dīn, was a disciple of the famous saint of Delhi, Nizāmu-d-dīn Auliyā who died on 18th Rabi ii, 725 H. (3rd April, 1325 A.D.). Shaikh Akhi, who had wandered on to Lakhnautī, died there on 1st Shawwal, 743 H. (27th February, 1343 A.D.),[2] just after its abandonment as capital. Two gateways to his tomb were erected by Sulṭān Huṣen Shāh himself in 916 H. *Riyāẓ* mentions that when Ilyās was being besieged in fort Ekdālā in 755 H., died a saint named Rājā Biyābana; and he was so highly honoured by Ilyās, that the latter in the disguise of a mendicant joined the saint's funeral, and after paying a visit to the camp of Sulṭān Fīroz came back to the fort in safety.

Jalālud-dīn Tabriẓi.

From the residence of these saints Pāṇḍuā came to be specially called *ḥaẓrat*. The earliest comer was Shaikh Jalālu-d-dīn Tabrīẓi who, driven from Delhi, wandered on to this town, where he is said to have brought from Makka the sacred foot-prints (Ḳadam Rasūl), which was removed later on to Gauṛ. This tradition must be pretty old, for it appears in a coin-legend of Fath Shāh, dated 890 H., or 1485 A D. ("The Shaikh who waits on the Ḳadam Rasūl).[3] Is he the same saint Jalālu-d-dīn who was visited by Ibn Baṭūṭah in Silhat in 745 H. ? *Riyāẓ* says that he appeared in a dream to 'Alī Shāh and promised him the kingdom of Bengal, and that 'Alī Shāh built in his honor a shrine, the traces of which existed up to his time. The present shrine is, however, a small mosque built in 1075 H. (1664-5 A.D.) by Shāh Ni'matu-llah of Fīrozpur, Gauṛ, with additions in 1084 H. (1673 A D.), and 1093 H. (1682 A.D.). The shrine is called from its estate *Bāis-haẓāri*, 22,000 bighās.[4] It has a grant-deed, the oldest in Bengal, dated 5th Maḥarram of the 13th year of the Emperor, Muḥammad-i Tughlaḳ (?), or 3rd August 1337 A.D

Alāu-l-haḳ.

Equally well known were the two saints 'Alā-ul-haḳ and his son Nūr Kuṭb-ul-'Alam. 'Alā-ul-haḳ was a disciple of the Delhi saint Niẓāmu-d-dīn[5] and also of the Lakhnautī saint Shaikh Akhi Sirāju-d-dīn, and though coming from Lahore (or Radanti in Oudh according to another account), was entitled *Beṅgali*, for his work in this province. He died on 25th Rajab 786 H. (12th September, 1384 A.D.), and lies buried in a tomb to the north-west of Jalālu-d-dīn's shrine, on the other side of Dīnājpur road. His tomb lies in close proximity to those of his wife, daughter, wife's sister and son's father-in-law.[6]

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1 This seems a title and not a name, Ātā being a Turkish word signifying father (Hindi *Bābā*) ; cf. Ātā Yasawī, *Aīn*, iii, p. 358.

2 J.A.S.B., 1895, p. 225.

3 J.A.S.B., 1890, p. 173.

4 Buchanan, *East. Ind.*, ii, p. 645.

5 *Aīn*, transl., iii, 363.

6 J.A.S.B., 1895, p. 207.

Nūr Kuṭb-ul 'Alam.

His son Nūr Kuṭb-ul-'Alam was even more famous. According to the *Mirāt-al-Asrār* written in 1045 H. (1635 A.D.),[1] his name was originally Shaikh Aḥmad and was subsequently changed to Makhdūm Shaikh Nūru-l-haḳ. He is mentioned therein as a contemporary of Ghiyāṣu-d-dīn of Bengal and Ibrāhim Shārḳi of Jaunpur, and as having been visited by A'ẓim Khān, the vizier (of Bengal). The saint is said to have died on 10th Ẓūl-ḳa'da 818 H. (11th January, 1416 A.D.), the chronogram of the year being *Nūr ba Nūr Shud.* The *Aīn* also devotes a special para. to this saint in its life of the Auliyās, but puts his death in 808 H., probably through a clerical mistake as Mr. Beveridge suggested.[2] His tomb is placed within the same enclosure as his father's, and has close to it those of his sons (Rafaḳu-d-dīn and Anwār) and his grandson Zāhid. The enclosure is called choṭi dargah (*che-haẓāri* or six-thousanded). None of the tombs has any dates. But over the cook-room of Nūr's *Cillā-khānā* (dwelling-house) is fixed an inscription dated Monday, 28th Zūl-hijjā, 863 H. (26th October, 1459 A.D.), recording the construction of a tomb (presumably Nūr's) by Latīf Khān in the reign of Maḥmūd Shāh.[3] North of the enclosure is the Ḳuṭb-Shāhi mosque, so called after the saint, but popularly known as the golden mosque of Pāṇḍuā. It was built in 990 H. (1582 A.D.) by one Makhdūm Shaikh (? a title adopted from the saint).

The city.

It will be seen that the older remains, such as the bath, Ādinā and Eklākhi, lie in the northern part, while the more recent structures are spread in the southern part, probably built when the river receded more and more off the town. The following nearly contemporaneous description of Pāṇḍuā and its palace appears in a Chinese encyclopædia, *Yuen-chien-lei-han*:—

"Beyond which [Sunārgāon] there is the city of *Pan-tu-wa* in which the king of the country resides. It is a walled city and is very large. The king's palace is very extensive, and the pillars supporting it are of brass, on which are engraved

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[1] Mr. Beveridge has kindly looked up the British Museum MS. of this work and has supplied me with these facts. He writes that though the life given is a long one, it is singularly destitute of information, and is made up of fabulous miracles wrought by him.

[2] *Aīn*, iii, 371; cf. J.A.S.B., 1895, p. 207, for other dates of his death 9th Zūl-ka'da, 818 H., and in its footnote 2, 19th Zūl-ka'da, 818 H. from *Riyāzu-l-auliyā.* This work is said to have been written in 1019 H. or 1679 (?): but if Abū-l-faẓl copied the accounts of his saints therefrom, some mistakes have crept in the printed figures. Abūl-l-faẓl was murdered on 4th Rabi I, 1011 H. or 22nd August, 1602 A.D. (N.S), or 23rd August, if it was a Friday, as alleged in *Wikāya'-i Asad Beg* (Elliot, vi p. 157).

[3] J.A.S.B., 1873, pp. 271-2, 270 (for the date). In 863 H., however, 28th Zūl-hijjah fell on a Friday and not Monday; similarly in Ilāhi Bakhsh's reading (J.A.S.B., 1895, p. 207) 18th Zūl-hijjah, 833 H. (7th September, 1430 A.D.) fell on a Thursday.

figures of flowers and animals. In the throne-room there is a raised dais, inlaid with every kind of precious stone, on which the king sits cross-legged with his sword lying across his knees."[1]

Old Māldā.

Old Māldā, centre of Trade.

This town, seven miles south of Pāṇḍuā, had a fine situation at the confluence of the Mahānandā and the Kālindi. The riparian changes that necessitated the retransfer of the capital to Gauṛ tended to make Māldā the trading suburbs of both Pāṇḍuā and Gauṛ. It was fortified with gates and had inside a high-walled *kāṭrā* or fortified caravanserai for the better protection of valuable goods. It had risen into importance during the Huṣeni rule, the *Phuṭi* (cracked) mosque north of the *Kāṭrā* having been built in the reign of Huṣen Sh̲āh, according to its inscription, dated 11th Sh̲awal, 900 H. (5th July 1495 A.D.). It might have begun to flourish still earlier, if the loose inscription kept in a tomb near the *Kāṭrā* really belonged to the place; for this inscription records the erection of a mosque by one Hilāl in the reign of Maḥmūd Sh̲āh (I), and is dated 19th Sh̲a'ban, 859 H. (4th August 1455 A.D.). In Akbar's time it continued to be a town of importance, having been mentioned in the *Akbarnāma*; while in the *Aīn* it appears among the 11 maḥals forming a tract of *sarkār* Lak̲h̲nautī.[2]

Manufactures.

Old Māldā had not only a great trade, but had been also a large centre of silk and cotton manufactures from a pretty early time. In a work written shortly after 987 H. (1579 A.D.), it is said:— "Sh̲er Kh̲ān gave to Sh̲aik̲h̲ Kh̲alil money, rich clothes, and manufactures of Mālda and Bengal in enormous quantities."[3] The letters of the English Agents at Paṭnā in 1620 and 1621 A.D. mention "doupattas of Maldah" and "a few Malda wares for patterns for Persia."[4]

Tāṇḍa.

Tāṇḍa as Capital, 972—1004 H.

Sulaimān, 977—980 H.

The word means high grounds, and it was naturally selected as being just above the point where the Ganges then separated into two branches.[5] Sulaimān Karar̲āni is said to have transferred the capital from Gauṛ to Tāṇḍa, the exact year of transfer being unknown. No coins of Sulaimān have been found.

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1 J.R.A.S., 1896, p. 205.
2 *Akb.*, Elliot, vi, pp. 45, 77; *Aīn*, Jarrett, ii, p. 132.
3 *Tārīk̲h-i Sh̲er-sh̲āhi* of Abbas Kh̲ān Sarwāni, Elliot, iv, p. 372.
4 *The English Factories in India*, 1618-21, Foster, pp. 195, 270.
5 For its position, *Akbarnāma*, vi, p. 45; Badāoni, ii, p. 187; and the sketch-map attached to this article.

In the 12th year of Akbar's reign (974-5 H.) he entered into a compact with him to strike the coin in Akbar's name; and before this year, he was probably too cautious to issue any in his own name.[1] After conquering Orissa and Koch Bihār, he died in 980 H. The exact month of his death is not given, but it must have taken place in the beginning of the second half of the Hijra year, as news reached Akbar while engaged in the Surāṭ campaign, the siege of that fortress beginning on 18th Ramaẓān, 980 H. (22nd January, 1573 A.D.).[2]

Bāyaẓid II, 980 H.

Dāūd, 980—984 H.

His elder son Bāyaẓid succeeded him. Unlike his father, he had the Khutbā recited and the coins struck in his own name. No coins of his have yet been found. After a short time, five or six months according to Badāoni, he was murdered by his brother-in-law Hānsu and other amīrs. Hānsu was in turn killed by Lodi, who raised the younger son Dāūd to the throne. Dāūd continued to coin money in his own name. His extant coins range from 981 to 984 H. (1573 to 1576 A.D.), with the mint Tāṇḍa.[3]

This assumption of independence brought him into war with the Emperor Akbar, which war may be roughly divided into three periods. In the second period beginning with the siege of Patnā, Dāūd beat a hasty retreat to his capital. But being closely pursued he fled towards Orissa, and Tāṇḍa fell into the hands of the Imperialist under Munim Khān on 4th Jumāda II, 982 H. (21st September 1574 A.D.). Dāūd was pursued up to Kaṭak Banāras, where a peace was patched up, Dāūd giving up his claims to Bengal, Bihār, and North Orissa. In the meantime the Afghāns in Ghoṛāghāṭ had defeated Majnūn Khān, and had forced him to take refuge in Tāṇḍa. Hurriedly returning, Munim reached the capital on 10th Safar, 983 H. (21st May, 1575, A.D.), and without entering it he proceeded against the rebels, who retired. Munim did not like the place and ordered the soldiers and the rayats to remove to Gauṛ, in the end disastrously for himself and his followers. He died on the completion of 10th Rajab, 983 H. (16th October 1575 A.D.).[4] Dāūd marched against Tāṇḍa, which the Imperialists hurriedly abandoned, when he re-occupied it with the frontier fort of Gārhi. Khān Jahān was sent against him as governor of Bengal. A decisive battle was fought at Āgmaḥal on 15th Rabi I, 984 H. (12th June 1576 A.D.), in which Dāūd was defeated and cap-

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1 *Akbarnāma*, Elliot, vi, p. 35.

2 *Tabaḳāt-i Akbari*, Elliot, v, p. 372 (981 seems to be a misprint for 980), *Akb. nā.*, Elliot, vi, p. 41; Badāoni, Lowe, ii, p. 177; for the beginning of Surāṭ siege, *Tab. Akb.*, v, p. 348, Bad., ii, p. 148.

3 I.M.C., ii, p. 182, No. 237 (981 H.), Nos. 236 and 238 (984 H.), others with dates lost, P.A.S.B., 1899, p. 48, *Lah. Mus. Cat.*, pp. 116-7.

4 *Tab. Akb.*, v, 382 *et seq.*; *Akbarnāma*, vi, 45, Bad., ii, p. 187 *et seq.*

tured. His head was sent to Akbar, and his body was shown on the gibbet at Tāṇḍa which Khānjahān had soon after occupied.[1]

Mughal Governors.

Khān Jahān, and after his death towards the end of 987 H. (December 1579 A.D.), Muẓaffar Khān, had their headquarters at Tāṇḍa. During the great military revolt of the Amīrs, the Ḳāḳṣāls crossing over from Gaur occupied the town. Muẓaffur who had taken shelter in the fort, "which was nothing better than four walls" (*Tab. Akb.*), was lured out and killed, and the Amīrs took possession of the fort in 989 H. (1581 A.D.). Towards the end of the 28th year (1584 A.D., 992 H.), Khān-i-'Aẓam Mirzā Koka reoccupied Tāṇḍa, and broke the back of the rebellion by inducing a number of the rebel chiefs to submit. In the 29th year Wazīr Khān was appointed governor of Bengal, and held his headquarters at Tāṇḍa till his death in the 32nd year (995-6 H). Said Khān became the next governor till the 40th year, when Bengal was made over to Mānsiṅgh, who had been governor of Bihār, Tirhut and Orissa.

Mānsiṅgh removed the seat of government from Tāṇḍa to Rājmaḥal, in the 40th year (1595-6 A.D., 1003-4 H.), according to Blochmann. In the *Aīn*, completed in 1596–7 A.D., Tāṇḍa appeared as the capital, the *sarkār* being also named after it, having a mint that issued silver, copper, and probably gold coins.[2] The fluctuations in the river course, no doubt, brought on this transfer to Rājmaḥal. Already in 1588 Ralph Fitch had noticed that the river had receded a league off from the city. After the removal, the town dwindled away. It appeared in history again in 1660 A.D., as the place where the prince Shāh Shuj'a retired erecting redoubts, and probably repairing the old fortifications. The river at the time flowed between the two contending forces, and therefore lay between it and Rājmaḥal. Shuj'a was ultimately forced to retreat to Dacca by boat.[3] The place appears in the map of Valentyn (1726) as "Thandah" and in Rennell's Atlas (1779-81) as "Tarrah" (see the sketch map). It has now disappeared, having been destroyed by floods about 1242 H. (1826 A.D.).[4]

Rājmaḥal, Akbarnagar.

Akbarnagar, Mānsiṅgh, 1004 (?)—1015 H.

Under its old name Āk, it came into prominence as the last battle-field of Dāūd on 12th June, 1576 A.D. At that time it had on one flank a mountain, and on the other a river —the Ganges.[5] Āk-maḥal appears in the

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1 *Akb. nā.*, vi, p. 55; *Tab. Akb.*, v, p. 400; Bad., ii, p. 245.

2 *Aīn.*, ii, pp. 129,130 (with the largest revenue in the *sarkār*); for the mint, i, p. 31.

3 *Riyāz*, p. 221. Hedges calls the place of battle Buglagotte, *Diary*, i, p. 87. 4 J.A.S.B., 1895, p. 216. 5 *Tab. Akb.*, Elliot, v, p. 397.

Aīn as a *maḥal* of the *sarkār* Tāṇḍa. After Mānsiṅgh had become the viceroy of Bengal, in the 40th year of Akbar's reign (1595-6 A.D.), he removed the headquarters from Tāṇḍa to this place, changing its name to Akbar-nagar, and opened a mint. A rupee of Akbarnagar, dated in the 50th year (1605 A.D.), is reported from the Lucknow Museum. It continued to be the capital during Mānsiṅgh's time (1003—1013, and 1014—1015 H.), and also during the time of his successors Shaikh Khubū *alias* Ḳuṭbu-d-dīn Khān-i Chisti (1015 H.), and Jahāngīr Ḳuli Khān (1016 H.). In the third year of Jahāngīr's reign (beginning on Thursday, 2nd Ẓulhijja 1016 H., 20th March 1608 A.D.) Islām Khān was appointed governor; and before the 7th year (beginning on 21st March 1612 A.D., N.S.) he had removed the capital to Dacca.[1] The main reason for removal was to check and subdue the Afghān remnants under 'Usmān. The large Jumā mosque (in ruins) and the six-piered bridge of Hadaf are ascribed to the time of Mānsiṅgh.

Kuṭbu-d-dīn, 1015 H.

Jahāngir Ḳuli, 1016 H.

Islām Shāh, 1017—1020 H.

Although the seat of government was removed, the mint[2] and the fort at Rājmaḥal were kept up. In the 19th year (beginning on 19th March 1624 A.D., N.S.) Ibrāhim Khān, the Bengal Viceroy, was besieged by the prince Khurram in the citadel of this fort. Ibrāhim was killed in a skirmish, and the citadel was stormed by the prince's forces. Subsequently on his defeat by the prince Parwiz, Khurram retired to Akbarnagar, and taking thence his munitions and baggage returned to Deccan.[3]

During the first viceroyalty of the prince Shāh Shuj'a (12th to 20th year of Shahjahān) Akbarnagar again became the capital, and continued to be the capital during his successor Nawāb Itaḳād Khān's rule and again during his second viceroyalty (22nd to 32nd year). When the fratricidal war broke out on Shāhjahān's serious illness, Shuj'a was defeated by Jaisiṅgh on behalf of Dārā near Benares, and retired to Akbarnagar. When Dārā was defeated and captured by Aurangzeb, Shuj'a again advanced, and was once

Prince Shāh Shuj'a, 1048—1056 H., 1059—1069 H.

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[1] Ḳuṭbu-d-dīn was appointed governor on 9th Jumāda I, 1015 H. (12th September, 1606 A.D.), and his death was reported to the Emperor in the 2nd year (beginning on 22nd Zūl-ḳa'da, 1015 H.), vi, p. 402, cf. *Wāki'āt-i-Jahāngīrī*, vi, pp. 327-8. The removal of the capital was carried out at least in the *sixth year*, as the battle in which 'Usman was killed took place in that year, on 9th Maḥarram, 1021 H. (12th March, 1612 A.D., N.S.), *Aīn*, transl, i, p. 520.

[2] Rupees of Jahāṅgīr, with mint Akbarnagar and of years 1st to 20th, are found in the various Museums of India and in the British Museum.

[3] Elliot, vi, pp. 391, 409, 410, 416.

more defeated by Aurangzeb. Pursued by the Imperialists, he retreated to Akbarnagar, where he entrenched himself. Unable to maintain himself there, he crossed over the river to Tāṇḍa, and the Imperialists occupied Akbarnagar. Shuj'a adorned the town with many handsome edifices His palace is in ruins. During Shāhjahān's reign the mint was in active work, coining rupees and probably moḥurs.

Capital removed to Dacca, 1070 H.

Aurangzeb's first governor, Mīr Jumlā, removed the head-quarters again to Dacca, evidently in the beginning of his rule (1659 A.D.). Regarding this removal Tavernier (1665 A.D.) remarked:—

"Formerly the Governors of Bengal resided here [Rājmaḥal], it being an excellent country for hunting, besides that it was a place of great trade. But now the river having taken another course, above a good half league from the city, as well for that reason as to keep in awe the king of Aracan and several Portuguese banditti, who are retired to the mouths of the Ganges and made excursion even as far as Daca itself; both the Governour and the merchants have removed themselves to Dacca."

Its later Mints.

The mint, however, kept up coining gold and silver coins, and the trade also did not die out with the removal of the capital. The European traders used to keep here agents to look after the local trade, the passage of boats from the upcountry and the coining of rupees. The English Company had an Agent here, and later on an Assistant too; bullion was sent on their behalf and was coined into rupees being charged with a customs duty of $3\frac{1}{2}$ p.c.[1] The mint continued very active in Aurangzeb's time, and was kept up in later reigns, though the country suffered from the various wars. Rupees so late as of 'Ālamgīr II have been found, the latest coin in the Indian Museum being dated *Aḥd*, 1167 H. (1754 A.D.).[2] This indicates that the coinage in this mint went on till the British conquest of Bengal.

Makhṣūṣābād, Murshidābād.

Makhṣūṣābād.

According to *Riyāẓ*, a merchant named Makhṣūṣ Khān built a *sarāi* there, and the place was called after him Makhṣūṣābād.[3] According to Tieffanthaler, Makhṣuṣābād was founded in the time of Akbar. The *Aīn* gives the name of a grandee Makhṣuṣ Khān (No. 70), who served in Bengal and Bihār, being the younger brother of the Bengal Viceroy, Said Khān. In Hājipur, opposite

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1 *Diary* of William Hedges, Yule, i, 50, 53, 57, 62, 69, 70, etc.
2 I.M.C., iii, p. 257, No. 2194.
3 *Riyāẓ*, p. 28.

Paṭnā, is a stone mosque built by one Makhṣus Khān in Akbar's reign, probably the same officer as above. In the *Bhaviṣyat-Purāṇa, Brahmāṇḍa* section, it is stated :—" in the vicinity of Kiriteśvarī is Morasudābād, founded by a Yavana."[1] The date of this work is, however, uncertain.

During Jahāngīr's reign the place had become well known for silk articles. In the letters of the Paṭnā Agents of the English, dated July 12, 1620 A.D., mention is made of " serbandy silke," " the best of Mucksoude and Sideabande, from whence theise sortes are wounde of"; and again, in the letter, dated April 11, 1621 A.D., it is written :—" Wee have ventured 500 Rup. [ees] to Mucksoudabande for samples [of] silke of the sortes wee provide."[2]

Along with Kāsimbazār, it became much more important in the second half of the eighteenth century. The English Agents, Streynsham Master and William Hedges, mention it as the seat of the local " governor " Bolcānd or Bulcānd Rāy, and in Hedge's *diary*[3] frequent complaints were noted against him for stopping English goods on various pretexts. Bolcānd died at " Moxudabad " on 29th November, 1683. It was then the seat of a mint. The Lahore Museum has a rupee of Aurangzeb with the mint Makhṣusābād, dated 1090 H., 22nd year (before Ramẓān, 1090 H., or before 6th October, 1679 A.D).[4] It is shown in Valentyn's map (1658-64 A.D.) as " Moxudabath," on an island formed by two branches of the Ganges.

Changed to Murshidābād, in 1116 H.

The Diwan of Bengal. Muḥammad Ḥadī, entitled Kartalab Khān, not pulling on well with the governor, prince 'Aẓimu-sh-Shān, removed his offices to Makhsusābād in the very beginning of the 18th century (1702 A.D. ?). He changed the name of the place to Murṣidābād, calling it after his new title Murshid Ḳuli Khān. This change appears from the coinage to have taken place from the 49th year (beginning in Ramẓān, 1116 H., 28th December, 1704 A.D.). Makhsusābād appears last in a rupee of 1116 H., 48th year, and Murshidābād first in a rupee of 1117 H., 49th year.[5] When Murshid Ḳuli became Deputy Nāẓim, and subsequently Nāẓim, it became the capital of Bengal, which it continued to be until with the battle of Plassey in June, 1757, the control passed to the British at Calcutta.

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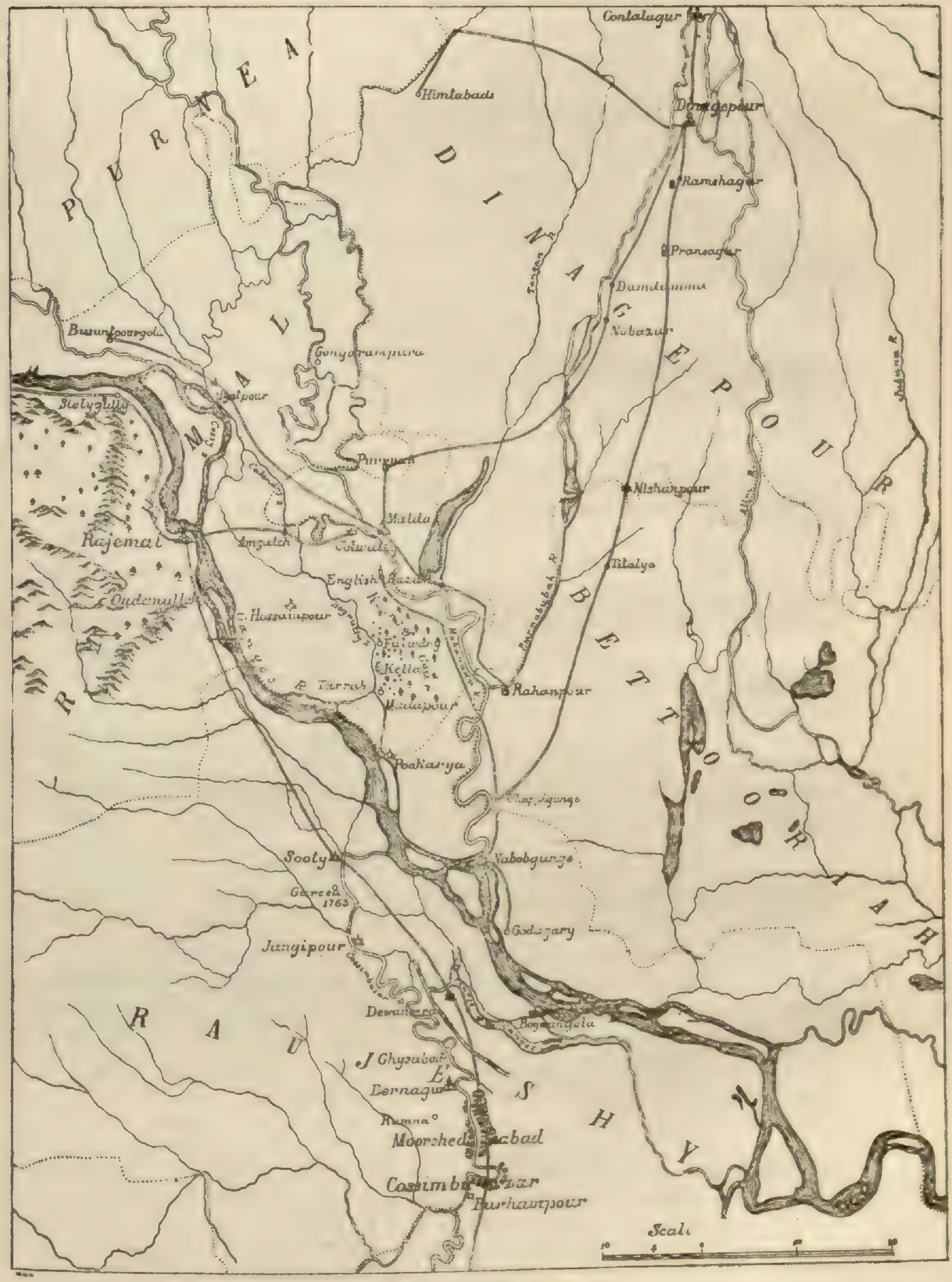
1 Ind. Ant., xx, p. 419.
2 *The English Factories in India*, 1618-21, pp. 194, 253.
3 *Diary* of W. Hedges, Yule, i, 33, 47, etc., 140 (death), ii, 234.
4 *Lah. M. C.*, p. 178.
5 For Makhṣūṣābād coins of 1116 H., L.M.C., p. 191 ; and for Murṣidābād coins of 1117 H., L.M.C., p. 191, and I.M.C., iii, p. 173, No. 1477.



THE TRACT ROUND GAUR.
(After Rennell, 1779-81 A.D.)

22. Mathura Inscriptions in the Indian Museum.

By Rakhal Das Bandyopādhyāya.

Most of the sculptures on which these inscriptions have been found were presented to this Society, forty-five years ago, by the Hon'ble G. F. Edmonstone, the then Lieutenant-Governor of the North-Western Provinces. Thirty-six years have elapsed since the first publication of these inscriptions by Dr. Mitra and Prof. Dowson. Since that time fresh discoveries in Mathurā, and the learned essays by the late Dr. Bühler, have thrown broader light on this subject, and it is time that these inscriptions should be republished. During these thirty-six years they have remained undisturbed in the Museum. Dr. Lüders has recently attempted to decipher them from the rough drawings published by Dr. Mitra, and Dowson's rather rude facsimiles. In particular instances Dr. Lüders' readings are far better than those of the previous workers, but the want of mechanical facsimiles of all inscriptions prevented him from completing his work. I am publishing these inscriptions now in the hope that the perfectly mechanical estampages published herewith may enable some other scholar to fill in the gaps which I am leaving.

In all there are thirteen inscribed sculptures from Mathurā in the Indian Museum. Ten out of these are pillar bases and the rest are on the pedestals of statues. When the Archæological Collections of the Indian Museum were re-arranged in 1898, want of space compelled the Museum authorities to remove the pillar bases to the godowns. They have recently been brought out, and I am taking the earliest opportunity of placing them in a revised form before the Society. In each case I have given the readings of previous workers so as to compare them with mine. Three inscriptions I have excluded from this paper, *viz.* :—

(1) The Pillar base inscription of the Bhikṣu Jivaka of Uḍiyana or Udyāna of the year 47. Dowson's facsimile [1] of this inscription is accurate, and Dr. Lüders' reading [2] admits of no further improvement. This is No. M. 2*d* of Anderson's catalogue.[3]

(2) Inscription on a small pedestal. Besides Dowson [4] and Mitra,[5] Dr. Fleet has published this inscription in the third volume of the Corpus.[6] Recently Dr. Lüders has once more published this inscription.[7]

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[1] J.R.A.S. (n.s.), Vol. v, p. 182, no. 1; see also J.A.S.B., Vol. xxxix, pt. I, p. 127, no. 1, and A.S.R., Vol. iii, p. 33, no. 12.

[2] Ind. Ant., Vol. xxxiii, p. 101, no. 12.

[3] Anderson's catalogue and hand-book of the Archæological Collections in the Indian Museum, p. 178.

[4] J.R.A.S. (n.s.), Vol. v, p. 187, no. xix.

[5] J.A.S.B., Vol. xxxix, pt. i, p. 129, pl. v, fig. xii.

[6] Fleet's Corpus Inscriptionum Indicarum, Vol. iii, p. 280, pl. xlii B.

[7] Ind. Ant., Vol. xxxiii, p. 105, no. 19.

(3) An unpublished inscription, on the drum of a pillar base of which *bhikṣusya* only is still legible.

The rest have been arranged as far as possible in a chronological order :—

I.—Inscription on a pillar base (M. 2*f*). Four different versions of this inscription have already appeared :—

(*a*) Mitra—दानं देविलिस्य दधिकर्णदेविकुलिकस्य सं ५९ दिवस ८० ।[1]

(*b*) Dowson—Dānaṁ Devilasya Dadhikarṇṇadevikulikasya saṁ 47, gṛi 4, divase, 20, 5.[2]

(*c*) Cunningham—Dānaṁ Devilasya Dadhi Kuṇḍi . . . devikulikasya saṁ 47, gṛ. 4, divase, 25.[3]

(*d*) Lüders—Dānaṁ Devilasya Dadhikarṇṇadevikulikasya saṁ 40 7, gṛi 4, divase 20, 9.[4]

But the inscription is (*see* pl. i, no. 1).

Dānaṁ Devilasya Dadhikarṇṇadevakulikasya, saṁ 40 7, gṛi 4, divase 20 . . .

There is no need of showing that *devikula* has the same meaning as *devakula* in Prakṛit. There is no *i* mark on the top of *va* of *deva*. Had it not been for another Mathurā inscription which mentions "*Nāyendrasya Dadhikarṇṇasya stāne*,"[5] I would have translated the first part of the inscription as "the gift of the merchant Devila-Dadhikarṇṇa." But as we know from a cognate inscription that Dadhikarṇṇa was the name of a Nāga at Mathurā, we can't differ from Dr. Lüders' translation.

TRANSLATION.

"(In the) year 47 the 20th day of the fourth month of the hot season ; the gift of Devila, the servant (or priest) of the god Dadhikarnna."

II.—Inscriptions on a pillar base (M. 2*e*). There are two inscriptions on this base of which one only has been noticed before :—

(*a*) This inscription has been noticed by Mitra,[6] Dowson,[7] Cunningham,[8] and Lüders.[9]

But the true reading is (see plate i, no. ii*a*) :—

"Saṁvatsare 40 7, va 2, divase 5, Asya purvvaye dānaṁ bhikṣusya Dharmmadatasya."

TRANSLATION.

"In the year 47 on the 5th day of the second month of the rainy season on the gift of the mendicant Dharmmadata (-datta)."

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1 J A S B. Vol. xxxix, pt. i, p. 127, no. ii.
2 J.R.A.S. (n.s.), Vol v, p. 183, no. 2
3 Arch Sur Rep., Vol. iii, p 34, no. 13. 4 Ind. Ant., Vol. xxxiii, p. 102.
5 Epig. Indica. Vol. i, p. 390, no. xviii.
6 J.A S.B., xxxix, pt. i, p. 130, pl. vi, no. xvii.
7 J.R.A.S (n s), Vol v, p. 183, no. v.
8 Arch. Sur. Rep., Vol. iii, p. 33, no. 11. 9 Ind. Ant., Vol. xxxiii, p. 102.

(*b*) This inscription is on another face of the pillar. Originally this side also contained a date. It is also very probably a record of the same man. It reads (pl. i, no. ii*b*) :—

(1) Dinnaṁ bhikṣusya Dharmmadattasya Dharmakathikasya Saṅghe catudiśe Sa (ṁ) vatsa (ra) . . . . .

(2) . . . . . hita Sukhaye bhavatu.

TRANSLATION.

"The gift of the Bhikṣu Dharmmadatta, the dharmakathika to the community of the four quarters . . . . . may welfare and happiness prevail."

I am not quite sure of the meaning of the word Dharmakathika.

III.—Inscription on the pedestal of a Jaina image (M. 12). This inscription was published for the first time by Cunningham with a drawing.[1] Bühler republished it from a rubbing.[2] He read the inscription as follows :—

(1) Namo Arahaṁtânaṁ, namo Siddhāna Saṁ 60, 2

(2) gra 3, di 5, etāye purvāye Rārakasya Arya Kakasaghastāsya.

(3) Śishyā Ātapiko gahabaryasya nirvartana chaturvarnasya Saṁghasya

(4) yā. dinnā patibhā bho) ga । (?) । (?) Vaihikāye datti

and translated it as :—

"Adoration to the Arhats, adoration to the Siddhas, the year 62, the summer (month) 3, the day 5. on the above date a *yā.* was given to the community which include four classes as an enjoyment (or one share for each), (this being) the nivartana of the Atapika Gahabarya the pupil of Ârya Kakasaghasta (Karkaśagharshita) a native of Rārā (Rāḍhā) the gift of Vaihikā (or Vaihitā)."

In 1904 Dr. Lüders [3] proposed to read :—

Vācakasya for *Rārakasya*
and *Gahabalā* for *Gahabarya.*

The facsimile is in favour of reading (see pl. i, no. iii) :—

(1) Namo Arhaṁtanaṁ namo Siddhana(ṁ) Saṁ 60, 2

(2) gṛ 3, di 5, etaye purvaye Rārakasya Arya Kaka maghastisya

(3) Siṣyā Ātapiko Gahabaryāsya nivartana catuvanisya Saṁghasya.

(4) yathā dinnaṁ paṭibhāgaṁ, aihikāye detti.

NOTES.

(1) In the second line the reading Rārakasya seems to be certain. The mātrā of the first *ra* is a bit longer than that of the second.

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1 Arch. Sur. Rep., Vol xx. p 87, pl v, no. 6.
2 Wiener Zeitschr f. d. Kwede d. Morgenl. (Vienna Oriental Journal), Vol. i, p. 172.
3 Ind. Ant., Vol. xxxiii, p. 105, no. 19.

(2) The last word in the second line is Aryakaka maghastisya. The correct name was probably *Kāka-Māghahasti* or *Kākamaṅguhasti*.[1]

(3) In the third line the name of the Atapika is *Gahabayā* and so cannot be the same as *Grahabala*.

(4) The fifth word in the third line is *Catuvanisya*, but this gives no sense. Perhaps it was meant to be *Caturvarṇasya*.

(5) The first word in the fourth line is *yathā*, and the last but one *aihikāye*. The letter *ai* is curious. It is the letter *e* with the downward stroke which usually used for *u*. Later on in Baudha-ghoṣa *Bau* is spelt with *u* (a straight downward stroke below) and a *ai* (two curved strokes to the right on the top). Gauridāsasya is similarly spelt in the seals recently discovered by Dr. Bloch at Basarh.[2]

TRANSLATION.

"Adoration to the Arhats, adoration to the Siddhas, the year 62, the summer (month) 3, the day 5, on the above date (this has been accomplished) at the request of the Ātapika Gahabayā, the female pupil of Ārya Kakamaghasti, a native of Rāra. (For the acceptance of) the community which includes the four classes. What has been given per share is being given for purposes of this world."

This translation is, I believe, the only possible one though it makes us assume the existence of many *uhya* words. At first I thought that Rāra was a misspelt form of Rāḍha, a province of Bengal. But the arguments of Mahāmahopādhyāya Hara Prasad Shastri, whom I consulted on this point, leave no doubt about the fact that the name Rāḍha was not in use up to the 5th century of the Christian era. In the third line *catuvanisya* is evidently the mason's mistake for *cāturvarṇasya*. The form *aihikāye* has nowhere been met with among contemporary inscriptions.

IV.—Inscription on a stone ladder (?) (M. 9). Dr. Mitra read this inscription as follows :—

...सं १० सर्व्वबुद्धाय दानं भिक्षुस्य बुद्धदासस्य ... सर्व्वसत्त्वाना... सव्व टलयरा... ।[3]

Dowson read this :—

Saṁvatsara . . . . . divase 10 asya purvaye dānaṁ bhikṣusya Buddha-sarvvasa . . .[4]

Prof. Lüders[5] reads :—

(1) Saṁ . . . . . diva

(2) se 10 asya pûrvyaye dānaṁ bhikṣusya Buddhanandi (s) ya . .

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[1] See Epig Indica, Vol. i, p. 391, no xxi, for this name Māghahasti.

[2] Annual Report of the Archæological Survey of India, 1903-4, p. 114, pl. xli, no 28.

[3] J.A.S.B., Vol. xxxix, pt. i, p. 129, pl. vi, no. xiv.

[4] J.R.A.S. (n.s.), Vol. v, p. 183, no. 3.

[5] Ind. Ant., Vol. xxxiii, p. 150, no. 26.

(3) . . . . . .

(4) Sarvva satv(ā) n (āṁ) . . . Sukh(ār) tha(ṁ) bhavatu.

The inscription originally ran round the four sides of a row of niches on the opposite side of which is a sculptured panel, now almost worn away. Only two niches and the following fragments of the inscription still remain (see pl. i, no. iv).

Saṁ . . . . . divase 10 Asyā(ṁ) pūrvvaye dānaṁ bhikṣusya Buddhanandisya . . . . . dāre (?) Sarva-sattr(ā)na(ṁ) hīta sukh (ār) tha(ṁ) bhavatu.

TRANSLATION.

"In the year . . . . on the tenth day, on the above mentioned the gift of the mendicant Buddhanandi . . . . . for the welfare and happiness of all beings."

V.—Inscription on a pillar base (M. 2*j*). According to Dr. Mitra the inscription is :—

दानं भिक्षुस्य बुद्धदासस्य संघमितस देवि परोसपचत्रिंशस्य दा + पित्रो व्व सुखस्य ।[1]

Dowson reads :—

Dānam bhikṣusya Buddhadāsasya Sanghamaitrasade vihare sa(m) panchatrisasya sata rahpetraivvasya vyasya.[2]

The facsimile favours the reading :—

(1) Dānaṁ bhikṣusya Buddha-dāsasya Saṅgḥamitra-sade-vihārisa pañcatriñśasya.

(2) . . . . . aivva sāṅghasya.

TRANSLATION.

"The gift of the bhikṣu Buddhadāsa (and) his fellow[3] (the bhikṣu) Saṅghamitra, the thirty fifth . . . . . of the . . . . . aivva congregation."

VI.—Inscription on a pillar base (M. 2*c*). Dr. Mitra reads :—

दानं भिक्षुस्य बुद्ध घोषस्य फल ... ।[4]

and Dowson agrees with Dr. Mitra.[5]

But the facsimile shows that the reading should be :—

Dānaṁ bhīkṣusya Baudha (Bauddha)-ghoṣasya phala pha . . . . . .

VII.—Inscription on a pillar base (M. 2). Dr. Mitra reads :—

दानं भिक्षस्य बुद्धरक्षितस्य मभिक्षस्य ।[6]

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1 J.A.S.B., Vol. xxxix, pt. i, p. 127, pl. v, no. 3.
2 J.R A.S. (n.s.), Vol. v, p. 185, no. 10.
3 See *Saddhyevihari* in the Sarnath inscription E.I., Vol. viii, p. 176.
4 J.A S.B., Vol. xxxix, pt. i, p. 128, pl. v, no. iv.
5 J.R.A.S. (n.s.), Vol. v, p. 186, no. 11.
6 J.A.S.B., Vol. xxxix, pt. i, p. 128, pl. v, no. x.

Dowson reads :—

Dānaṁ bhikṣusya Buddharakṣitasya cha bhikṣusya . . . . [1]

The facsimile is in favour of the reading :—

(1) Dānaṁ bhikṣusya Buddha-rakṣitasya Bhaṇḍakṣasya Saṅgh(e).

(2) Catudiśe.

NOTES.

(1) There is a superfluous ī on the top of *kṣu* of bhikṣusya.

(2) The reading bhaṇḍakṣasya is certain. It is most probably a proper name.

TRANSLATION.

"The gift of the bhikṣu Buddharakṣita (an inhabitant) of Bhaṇḍakṣa to the community of the four quarters."

VIII.—This inscription is almost identical with the following two. These three record the gifts of pillar bases by Viśvasika-Vakamihira, and his son Horamudkhapharu. One of them No. x contains two inscriptions, one on the square portion of the base, and the other on the circular portion. Dr. Luders suggested some improvements on the previous readings of this inscription, some of which have been accepted.[2]

This inscription is on the pillar base (M. 2*a*) of Anderson's catalogue. Dr. Mitra read it :—

दानं सके १४० बुधमिहिरस्य सिह पुत्र... ...

..... धर्म्मभिक्षुद ... ... ।[3]

Dowson reads :—

. . . . Mihirasya Sinhaputra . . . Devadharma pu[4] . . .

The facsimile shows :—

(1) Dānaṁ Viśvasikasya Vakamihirasya sahāputreṇa Horamurṇḍate (na) ma ;

(2) Devadharma parityagena bha(a)cala Sukhaye bhavatu.

NOTES.

(1) The letter following *rṇḍa* in the first line is unlike any Brāhmī letter that I have seen. On the other hand it is curiously similar to the Kharoṣṭhí *Vo*.

(2) The second letter after *rṇḍa* is like the *ma* in the Bhaṭṭiprolu inscriptions.

IX.—Inscription on a pillar base (M. 2*h*). Dr. Mitra reads the inscription :—

दत्तभिक्षुस्य दानं संघपुत्रस्य हारमूर्ड्डत

देवधर्म्म परत घ्रतत ... ।[5]

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[1] J.R.A.S. (n.s.), Vol. v, p. 187, no. 17.
[2] Ind. Ant., Vol. xxxiii, p. 154, no 34, 35 and 36.
[3] J.A.S.B., Vol. xxxix, pt. i, p. 128, pl. v, no. vi.
[4] J.R A.S. (n.s.), Vol. v, p. 186, no. 13.
[5] J.A.S.B., Vol. xxxix, pt. i, p. 130, pl. vii, no. xx.

Dowson does not seem to have noticed this inscription. It is :—

(1) Dānaṁ Viśvaśikasya Vata(ka) mihirasya sahā putrena Horamudkhatena i-(mena).

(2) Devadharma parityāgena acala makha (? Sukha) hitaye bhavatu.

NOTES.

(1) *Va* is very peculiar in this inscription. Here it looks like *Vva* in all cases but one, *viz. Viśvaśikasya.*

(2) The letter following *dkha* in the first line looks like *Kh. Vo* in this inscription also.

X.—As noticed above there are two inscriptions on this base. (M. 2*g*) :—

(*a*) On the square portion of the base. Dr. Mitra reads (see pl. i, no. x*a*).

दानं विश्वसिकस्य बुद्ध मिहिरस्य सिहपुत्रे ... रमनक ... मेन देवीधर्माय रि ट्ठगे... ।[1]

Dowson reads :—

Dānaṁ Visva devakasya Vasumihirasya Siñha putr . . . . . Imena deviddharma parityā . . . . [2]

The rubbing shows :—

(1) Dānaṁ Viśvasikasya Vakamihirasya sahā putrena Hora mudakharena.

(2) Imena Devaddharma parityagena, acala hita sukhaye (?) bhavatu.

The above three inscriptions differ very little materially and so have been translated together.

TRANSLATION.

"The gift of Viśvasika Vakamihira with (his) son Horamudkha. Let this sacrifice and pious gift be for the stable happiness."

As has already been noticed by Mr. Bhandarkar the phrase "*Anena deya dharma parityāgena*" occurs on another inscribed pillar base from Mathura. I have since discovered the phrase in another inscription from Mathura. This inscription was brought to notice by Mr. Growse.[3] So far as I am aware it has nowhere been properly published. The inscription is now in the Lucknow Museum (see pl. i, no. xi.).

TEXT.

(1) Mahārajasya devaputrasya Huvaṣkasya sa(ṁ) vatsare 50, 1, hamanta māsa । dava . . . . asya purvaye Bhikṣusya Buddhavarmasya . . . .

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[1] J A.S.B., Vol. xxxix, pt. i, p. 128, pl. v, no. v*b*.
[2] J.R.A.S. (n.s.), Vol. v, p. 186, no. 13.
[3] F. S. Growse's Mathura ; a district Memoir, 3rd. Ed., p. 116.

(2) Pratimā pratiṣṭāpita sarva Buddha pujānā anena deya-dharma parityāgena upādhyāyasya sa(ṁ)ghadāsasya jñanā-vāptaye-stu mātāpitā . . . .[1]

(3) Buddhavarmasya Savad(u)kha paśamāya sarvasatva hito sukhārtha Mahārāja Deva . . . vihāre . . . .

TRANSLATION.

(In the reign of) the Mahārāja Devaputra Huvaṣka in the year 51, the day of the first winter month. On the above mentioned day the . . . . image (which is the gift) of Bhikṣu Buddhavarman was set up in honour of all the Buddhas. By this sacrifice and pious gifts let it be for the acquirement of knowledge (or Nirvāṇa) by the teacher Saṁghadāsa, mother and father . . . . for quenching all grief of Buddhavarman, for the well-being and happiness of all Beings. In the Vihāra of Mahārāja Da . . . .

(*b*) On the circular portion of the base.

Dr. Mitra reads :—

दानम् वसुमिहिर पुत्रस्य पत्र(?)म दास ।[2]

Prof Dowson reads :—

Dānaṁ Vasumihiraputrasya putramadesa.[3]

Dr. Lüders has not attempted a complete reading of this inscription.[4]

The facsimile is in favour of reading (see pl. i, no. x*b*).

Dānaṁ vakamihiraputrasya Horamudkhapharusya.

TRANSLATION.

The gift of Horamudkhapharu, the son of Vakamihira.

The word Pharu has nowhere been met with in cognate inscriptions and is not easily explainable. It may be a part of the proper name, but its absence on other pillar bases is remarkable.

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[1] As will be seen from the facsimile, the reading of this word is very doubtful. *Nirvāṇāptaye* would be equally possible and acceptable.

[2] J.A.S.B., Vol. **xxxix**, p. i, p. 128, no. v*a*.

[3] J.R.A.S. (n.s.), Vol. v, p. 186, no. 12.

[4] Ind. Ant., Vol. xxxiii, p. 154, no. 34.

23. Saptagrāma or Sātgānw.

By Rakhal Das Bandyopādhyāya.

With a note on a new inscription of Alāuddin Husain Shāh by Dr. T. Bloch, Ph.D.

The existence of Sanskrit inscriptions in the Dargah of Zafar Khān Ghāzi was noticed by Mr. D. Money more than sixty years ago.[1] They have also been noticed by Dr. Bloch in one of his Annual Reports.[2] These are the most interesting ruins in Saptagrāma. Many people think that Triveṇī did not belong to Saptagrāma proper, but proofs against this belief will be adduced later on.

Pre-Mahomedan Saptagrama, Hindu ruins.

What we know about Saptagrāma before the Mahomedan conquest, has been gathered chiefly from Hindu sculptures, which were used in mosques and tombs, which again have crumbled to pieces, disclosing the sculptures which were buried in them hundreds of years ago. The only Hindu ruin still to be found in Saptagrāma is the temple at Triveṇī, better known as the Mazār of Zafar Khan Ghāzī or "গাজির কুড়ুল"। The cluster of temples in the courtyard, which Mr. Money has described, have now completely disappeared, with the exception of the mosque and the Mazār. The Mazār consists of two roofless rooms. The plinth of these two rooms is built of black basalt. The room near the road is also built of the same material. In this room lies the Ghāzī himself and his wife. Previous writers have noticed that these rooms were constructed from materials taken from the ruins of the Hindu temple. But a closer examination shows that the room is an *Antarāla* of the Hindu temple still standing intact. The plinth, the walls, door jambs, lintels, are all constructed of the same material. There are four openings, each of them facing one of the cardinal points. The eastern and western doorways have been filled up with brick lattice work. The photograph (Pl. I) shows the northern gateway, one of the jambs of which has fallen and its place has been filled up with brick work. The fallen doorjamb, which is lying on the ground in front, may be replaced very easily. I hope the Government Overseers who are now carrying on the repairs will not overlook this. The western gateway faces the river. There is a flight of stone steps rising up to the level of the temple. Both the western and southern gateways are still in a good state of preservation. In all the gateways the door jambs are profusely

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[1] J.A.S B., vol. xvi., pt. i, p. 393.

[2] Annual Report of the Archæological Survey, Bengal Circle, 1902, p. 24.

ornamented. A small niche at the bottom contains a female figure, and by the side of the niche two squatting Yakṣas bear square ornamented pilasters supported on flower vases on their backs. In the southern gateway the human figures have been carefully chiselled away, but on the western and northern gates they remain with sufficient distinctness. The eastern gate opens the way to the other room. In this room are four tombs on a masonry platform. The walls of this room are built of a light reddish sandstone. There are some crude ornamentations on the door jambs. The walls have been very losely built of huge shapeless blocks of stone with mortar joints. Centuries of rain have washed away the mud from the upper portion of the walls, showing that the interstices were filled up with all sorts of sculptures and broken pieces of statuary. This room most probably occupies the space formerly occupied by the pillared Maṇḍapa of the temple. This room contains the Sanskrit inscriptions mentioned by Mr. Money and Dr. Bloch. All of the inscriptions are on the north-western and north-eastern quadrants of the room. They are descriptive labels of scenes from the Rāmāyana and the Mahābhārata, and the stones on which they have been inscribed is black basalt. Most of them are at a height of two to three feet from the ground level.

Scenes from the Rāmāyana :—

(1) *Sītā Vivāhaḥ* (pl. iia).
(2) *Khara-triśirasor=vadhaḥ* (pl. iib).
(3) *Sri-Rāmeṇa Rāvaṇa vadhaḥ* (pl. iic).
(4) *Sri-Sītā-nirvvāsaḥ, Sri Rāmābhiṣeka* (pl. iid).
(5) (*Bharat*)*ābhiṣeka* (pl. iie).

Scenes from the Mahābhārata and the life of Śrī Kṛṣṇa.

(1) *Dhṛṣṭadyumna-Duḥśāṣanayor=yyuddham* (pl. iif).
(2) *Cānura-vadhaḥ* (pl. iig).
(3) *Sri Kṛṣṇa-Vāṇāsurayor=yyuddham* (pl. iih).
(4) *Śrī Kṛṣṇa-Vā-*(pl. iii).
(5) *Kaṁsa-Vadhaḥ* (pl. iij).

These descriptive labels were most probably incised below basreliefs representing these various scenes and were most probably used as outer friezes in the architrave of the Antarāla of the temple. The letters are 3 to 4 inches in length, so that a man standing on the ground could easily read them even at a height of 25 or 30 feet. After the demolition of the upper part of the Antarāla the sculptures were sawn off and the rest of the pieces were used in building the room on the site of the Maṇḍapa. The orthodox builders did not mind the inscriptions as they were not sacrilegious. The two pieces of iron sticking in the western doorway of the temple are undoubtedly hooks for fastening the chains of the gates. Hooks of the same size are still used in the temple of Baidyanātha at Deoghur. These two pieces of iron have worn-out grooves in the stone and in which they now move. This has led to the proverb গাজির কুড়ুল নড়ে চড়ে

পড়ে না *i.e.*, "the Ghāzi's axe moves but does not fall." In the mosque itself four images have been stuck in the wall between the mihrābs (Pl. III). Three of these bear inscriptions on their backs while the fourth is an image of Viṣṇu recognisable by the *gadā* which is to be seen through a hole at its back. The temple at Triveni was most probably a Vaiṣṇava temple as the descriptive labels show, but traces of Jainism and Buddhism also are not absent. In the mosque there are two rows of pillars with six pillars in each row (Pl. IV). In the central row, the second pillar from the north is quite different from the rest. It is a square pillar, unlike the octagonal or the hexagonal shape of the others. The base also is square, and on it there are four Buddhas in the *Bhumisparśa Mudra*, separated from each other by a small pilaster set in a recess. Further examination revealed that this base is a fragment from the corner of a rectangular piece of sculpture. These figures face the south. On the western face also two of those figures are still discernible. The only other relic of pre-Mahomedan Saptagrāma was found inside the room which now stands on the site of the ancient *Maṇḍapa* of the temple. The inscription of Ruknuddin Bārbak Shah of H. 860, has been incised on the back of the lower portion of an image of Pārśvanātha, the twenty-third Tirthaṁkara. The feet of the image still remain, and behind them are seen the coils of the serpent (*śeṣa*) which rose over the head with its extended hood. On each side of the image is an exquisitely ornate vase from which issues the stalks of some creeper. The pedestal below is also ornamented with neatly arranged coils of snakes. At Panduāh, close to Saptagrāma, two Hindu sculptures have recently been discovered. The inscription of the Sultān Shamsuddin Yūsuf Shāh of H. 888 has fallen from its place in the masjid and is now lying in front of the grave of Shāh Ṣafi. On examining it closely it was found that this inscription was incised on the back of the lower part of an image of Sūryya. The legs wear top-boots and on the pedestal there are seven prancing steeds with Aruṇa, the charioteer. On each side of the image is a small female figure shooting arrows. To the left of the image stands a male figure with a sword in hand, probably Śanaiścara (*Saturn*), and to the right another male figure with an ink-pot and a pen in his hands.[1] In the compound of the Dargah I found fragments of an image. On putting these together it was found that the pieces are from an image of

Buddhist ruins.

Jaina relics.

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[1] Cf. Agnīpurāṇa (Bib. Ind.)

सप्तास्ये सैकचक्रे रथेसूर्य्योद्विपद्मधृक् ।
मसीभाजनलेखन्यौ विभत्कुण्डौ तु दक्षिणे ॥
वामतु पिङ्गलो द्वारि दण्डभृत् स रवेर्गणः ।
वालव्यजनधारिण्यौ पार्श्वे राज्ञौ तु निष्प्रभा ॥

Chap. 51, verse 1-2.

Viṣṇu. To the left is the goddess Sarasvatī, vīṇā in hand; and to the right Lakṣmi with a lotus stalk in her hand, and above her head the two hands of Viṣṇu, one holding the *gadā* and the other a lotus. The ruins of Panduāh have otherwise been fully discussed and illustrated by Dr. Blochmann. I publish a photograph of the exterior of the Bāiś Darwāzā masjid (Pl. V) in accordance with the wish expressed by that scholar.[1] In a paper read at a recent meeting of the Society, Babu Manmohan Chakravarti, M.A., B.L., has called attention to the fact that the portion of Bengal conquered by Muhammad Bakhtyār extended from Lakhnor in the south to Deokoṭ in the north. This fact is further emphasised by the Arabic inscriptions of Sātgānw. The mutilated Arabic inscription on the southern mihrab of the mosque at Triveṇī clearly states that "Zafar Khan smote the infidels with sword and spear and lavished treasure on the (faithful)." The date of this inscription is A.H. 698, *i.e.*, 1298 A.D. Thus Lakhnauti, Lakhnor and Deokot were conquered in 1198-99 A.D. But the tract below Birbhum and the delta between the Bhāgirathī and the Padmā maintained a precarious independence for more than a century. The attack on Nadiyā was most probably a raid, because traces of early Mahomedan occupation is altogether absent. Bihār, Dināpur and the neighbourhood of Gaur show ample proofs of an earlier Mahomedan conquest. This inscription also mentions one Nāṣir Muhammad, *alias* Burhān Qāzi. It is interesting to note that the name of the Barā Ghāzi, whose tomb lies in the room on the site of the ancient Maṇḍapa, is known to us from the Kursināmā of the Mutwallis as Barkhān Ghāzi. This Barkhān Ghāzi seems to be a *Apabhraṁśa* of Burhān Qāzi.

Mahomedan conquest of Satganw.

If the date of the conquest of Sātgānw is correct, then the conquest falls in the reign of Ruknuddin Kaikāus Shāh of Bengal, the grandson of the Emperor Ghiaṣuddin Balban. Zafar Khan was most probably the Commander of the expedition, and he became the Governor of the conquered province. Zafar Khan is known from the Triveni inscription to be of Turkish descent. Before the expedition he was the Governor of Deokoṭ. This is known from the Gangārāmpur inscription of Kaikāus. Zafar Khan most probably was the title of the man. His real name seems to have been Bahrām Itgīn. His full name and titles are given in the Dināpur inscription, Ulugh i A'zam Humáyún, Zafar Khān Bahrám Itgin. This inscription was incised just a year before the Triveṇī inscription (A. H. 697).[2]

Mahomedan Governors of Satganw.

Zafar Khan was alive in 1313 A.D. This is known from an inscription now stuck on the tomb of Burhān Qāzī at Triveṇī. This inscription states that a Madrasah was built by Khān Muhammad Zafar Khān, the supporter of Kings and Sovereigns,

Zafar Khan 1298-1313 A.D.

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[1] J.A.S.B., pt. i., 1870, p. 300.

[2] J.A.S.B., pt. i., 1872, p. 103.

etc., during the reign of Shamsuddin Firōz Shāh in A.H. 713.[1] The next mention of Sātgānw is to be found in the Tārīkh-i-Firūz-Shāhi during the reign of Ghiāuṣddīn Tughlaq, when he marched to chastise Bahādur Shāh, the last Balbanī Sultan of Bengal.[2]

After this Sātgānw was placed under the military Governorship of 'Izzuddin Yahyā A'zam-ul-Mulk, who held that post from 724 to 740.[3] Sātgānw appears as a mint town during the reign of Muhammad Tughlaq, the second King of the Tughlaq dynasty of Delhi, and the earliest coin is dated A. H. 729. Sātgānw continues to be a mint town up to the reign of Islām Shāh, son of Sher Shāh, and the latest coin is dated A. H. 957.[4]

Nothing further is known about Sātgānw during the first Iliyās Shāhī dynasty and the dynasty of Rājā Kāns. The next notice is to be found in the Triveṇī inscription of Ruknuddin Bārbak Shāh, incised during the lifetime of his father Naṣiruddin Mahmud Shāh, the first King of the resusciated Iliyās Shahī dynasty. This inscription has been inscribed on the back of the pedestal of a statue of Pārśvanātha, as has been mentioned above, which is dated A. H. 860. Here Bārbak Shāh has been styled Malik. It records the erection of a masjid by Ulugh Ajmal Khān, the Commander of the army of the noble Iqrār Khān, who was the guardian of the Royal harem, Commander, Wazir of the District of Sājlā Mankhbád and the town of Lāoblā.[5] This Iqrār Khan is known to us from two other Bengal inscriptions. Both of them are dated in the year 865 A.H. and were discovered in the Dināǰpur District. Both of them record the erection of mosques by Khān Ulugh Iqrār Khan, during the reign of Ruknuddin Barbak Shāh. One of them states that the repairer of a tomb is the Ulugh Nusrat Khān a Jangdar and Shiqdar (both of them subordinate officers).[6]

Iqrar Khan 1455 A.D.

The next notice of Sātgānw is in the inscription of Nāṣiruddin Mahmud Shāh now lying by the side of the tomb of Sāyyid Jamāluddīn, a few hundred yards from the Trishbighā station. It records the building of a mosque by Tarbiyat Khan in 861 A.H. This inscription proves that Iqrār Khan was succeeded in the government of Sātgānw by Majlis Nur a year after the erection of his mosque.[7] Nothing further is known about this Tarbiyat Khan.

Tarbiyat Khan 1456 A.D.

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1 J.A.S.B., pt. i., p. 287.
2 Tarikh-i-Firuz-Shahi of Barni (Bib.: Ind.), p. 451.
3 J.A.S.B., 1874, pt. i., pp. 190-91.
4 Nelson Wright's Catalogue of Coins in the Indian Museum, Vol. ii, pt. ii., pp. 155-62, and pt. i., pp 53 to 113.
5 J.A.S.B., 1873, pt. i., p 290 In this inscription the reading غیر is to be preferred to the reading عذ proposed by Dr. Blochmann in J.A.S.B., 1873, pt. i., p. 273, footnote.
6 J.A.S.B., 1873, pt. i., pp. 272-73, and also J.A.S.B., 1875, pt i., pp. 290-91.
7 J.A.S.B., 1870, pt. i., p. 292, and 1873, pt. i., p. 270.

The next inscription from Sātgānw was discovered at Panduāh. I have stated above that Panduāh was a city close to Sātgānw. The District Sājlā extended from the banks of the Sarasvati to those of the Damodar, and the head-quarters of the District Sājlā Mankhbad was Sātgānw, as will be proved by several inscriptions, one of which has already been mentioned. This inscription, as already narrated, has been incised on the back of the lower portion of a statue of Sūryya. It records the erection of a mosque by a noble Majlis-ul-majālis (this is a title, the proper names of the Bengal nobles during the earlier period of Mahomedan domination generally is not known to us, as has already been seen about Zafar Khan and Bahrām Ītgīn) during the reign of Shamsuddin Yūsuf Shāh, son of Bārbak Shāh, in 882 A.H.[1] This inscription and the fragments of the image of Viṣṇu prove that even after the conquest of Sātgānw, Mahomedan authority was very loosely exercised in the surrounding districts. The magnificence of the Hindu ruins discovered among the masjids at Panduāh shows that the Saura and Vaiṣṇava community possessed fine temples with magnificent colonnades, and were very rich. These religious establishments were probably sacked by the order of the Sultan Yūsuf Shāh and the remains used in the minār and masjids. The statue of Sūryya being a large one, a portion of it has been used as the inscription slab of the masjid. But the statue of Viṣṇu being more diminutive in size was pulled to pieces and the fragments thrown into the neighbouring tank. Five centuries later the Mutwali of the Mazār, while re-excavating the tank, found some loose pieces of the image. I found the fragments imbedded in the temporary hearths which the workmen had put up while the work of re-excavation was going on.

Ulugh Majlis Nur 1486.

The next inscription records the erection of a mosque during the reign of Jalaluddin Fatḥ Shāh, the last King of the second Iliyās Shāhi dynasty, by Ulugh Majlis Nur in 892 A.H. This Majlis Nur was the Commander (*Sarlaskar*) and Wazir of the Arṣa Sājlā Mankhbād and the city Simlābād and Commander of the Thana of Laoblā and Mihrbak and the Arṣā and Mahal Hadigarh.[2] Nothing is known about Sātgānw during the troubled period which followed the fall of the Iliyās Shāhi dynasty and when the Abyssinian slave Maliks declared independence. Light breaks in once more upon Sātgānw with the rise of Saiyyad and Husainī dynasty. Three inscriptions of the reign of Alauddin Husain Shāh have been discovered in the masjid at Triveṇi, only one of which is dated :—

Ulugh Masnad 1505 A.D.

(1) Inscription on the southern side of the inscribed mihrab of Zafar Khan recording the erection of a mosque by Ulugh Masnad Hindhū Khan, who was the Sarlaskar and Wazir of Husainabad and of the Arṣā of Sājlā Mankhbād and Sarlaskar of

[1] J.A.S.B., 1873, pt. i., pp. 275-76. [2] J.A.S.B., 1870, pt. i., pp. 293-94.

the Thana of Lāoblā during the reign of Alāuddin Husain Shah in 911 A.H. This inscription has not been noticed before. Maulavi Khair-ul-Anām of the Hare School deciphered it for me. Dr. Bloch edits the complete text below.

(2) Inscription to the south of the central mihrab. This is completely worn out and nothing further is intelligible beyond Abu'l Muzaffar Husain Shāh in the centre.[1]

Ruknuddin Rukn Khan.

(3) Inscription recording the erection of a mosque by Ruknuddin Rukn Khan, son of Alauddin of Sarhat. There is no mention of the reigning Sovereign's name and the date in this inscription. Rukn Khan is stated to be Sarlaskar and Wazir of the town of Husainabad Buzurg, of the Arṣā of Sājlā Mankhbād and Sarlaskar of the Thana of Lāoblā and the town of Hadigarh.

Ulugh Masnad Hindhū Khān is known to us from another inscription.[2] Twenty-eight years later in the Kalna inscription of Alauddin Firuz Shāh, he builds a mosque at Kalna. In this inscription also he is known as Sarlaskar and Wazir, but his districts have not been specified. Ruknuddin Rukn Khan is also known from another inscription in which the date and the name of the King are clearly stated. From this inscription he is known to have been the Wazir of the town Zafarābād and Sarlaskar and high Kotwal of the town of Firozabad (Panduāh Hazrat). It is possible that he held the Governorship of Sātgānw during the earlier years of the reign of Husain Shāh, but later on he was rewarded with the Governorship of the Metropolitan districts. The date of this inscription is 918 A.H.[3] The latest inscriptions from Sātgânw record the erection of two mosques by Sāyyid Jamāluddin, son of Sāyyid Fakhruddin of Amul in 936 A.H. One of these inscriptions have been set up in the wall of Jamāluddin's masjid, which stands near his grave.[4] The other one is lying on the ground inside the enclosure of Jamāluddin's tomb.[5]

Identification of the names of places.

Mention has been made of Hadigar or Hadigarh twice—once in the inscription of Fath Shāh and again in the inscription of Ruknuddin Rukn Khan. Blochmann says he has not succeeded in identifying the place, but Hadigar or Hadigarh is undoubtedly a mis-spelt form of Hāthiāgarh. This pargannah is now included in the Twenty-four Pergannahs and has been divided into two separate fiscal divisions.[6] Husainabad has also been mentioned twice, in inscriptions incised during the reign of Alauddin Husain Shāh. From the

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[1] *Ibid.*, p. 285.
[2] J.A.S.B., 1872, pt. i., p. 332. This inscription is now in the Indian Museum.
[3] J.A.S.B., 1872, pt. i., p. 106.
[4] J.A.S.B., 1870, pt. i., p. 298. [5] *Ibid.*, p. 297.
[6] Statistical Account of Bengal, vol. i, p. 232.

inscription of Ulugh Masnad of 911 A.H., we know he was Sarlaskar and Wazir of Husainābad. This Husainābad is undoubtedly the Husainābad in Twenty-four Pergannahs just across the river.[1] The Husainābad Buzurg mentioned in the inscription of Ruknuddin Rukn Khan is most probably the Husainābad in the Murshidabad district. Local tradition narrates that in his early life Husain Shāh was employed as the Cow-herd of a Brāhmaṇa who lived near Gokarṇa in the modern Kāndi subdivision. This Husainābad Buzurg is certainly not the Husainabad near Māldah which was a mint town during the reign of the Husaini dynasty.[2] Anyway the Husainābad Lāoblā, as Blochmann has already pointed out, is undoubtedly Laopālā in the Twenty-four Pergannahs 10 miles due East from Triveṇī.[3] It is mentioned at first as a town and later on as a Thana or military outpost. Sājlā Mankhbād is undoubtedly the district in which Sātgānw was included as it has been mentioned wherever districts have been specified against the names of Governors in inscriptions. The modern name of the Parganah which includes Sātgānw is Arsā or Arṣā. In all inscriptions Sājlā Mankhbad has been mentioned as an 'Arsā, most probably in common use the name was dropped and gradually the term Arsā itself became a proper noun. Portions of this Parganah have now passed into the Burdwan District, while the major portion is included in Hughly.[4] Probably Blochmann has correctly taken the term 'Arsā to mean a Sirkar and not as usually a Parganah during the earlier years of Mahomedan rule. From the Ain-i-Akbarī[5] we find that the Parganah Akbar Shāhi or Bhalkonda, commonly known as Sāndal, was included in the Sirkar of Sharifabad. During the British period this Parganah is known as Burdwan and Akbar Shāhi. The name Sandal is no longer used. On further enquiry I learn that the name was সাঁচল or সাঁচন but it is not to be found in the 18th or 19th century records.[5] But in some unknown way the name সাঁচন or সাঁচন has survived up to the present day. The district seems to have included the modern Parganah of Burdwan, Parganah Haveli in the same district, and the Parganahs of Hughly lying to the north of the Sarasvati. Such an extensive tract of land could never have been included in one Parganah. Hence it is possible that in older days the term Arsa was equal to a Sirkar. The peculiar pronunciation makes the word sound more like সাঁচোর or সাঁচর। It may be that the name is older. Its Sanscritised form has been found in manuscript brought from Nepal by Mahāmahopādhyāya Haraprasād Śāstri during his recent visit. The manuscript is a copy of *Bodhicaryyāvataru*. The colophone runs thus :—

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[1] *Ibid.*, p. 233.

[2] H. Nelson Wright's Catalogue of Coins in the Indian Museum, vol. ii, p. 173 to p. 180.

[3] J.A.S.B., 1870, pt. i, p. 294, footnote.

[4] Statistical Account of Bengal, vol. iv, p. 173, and J.A.S.B., 1870, pt. i, p. 295.

[5] Jarrett's translation, vol. ii.

दे धर्म्मोऽयं प्रवर महायानयायिनः सहिश्वरीग्रामावस्थितकटुम्बिक-कोच्छ-उच्छमहत्तमश्रीमाधव (मि)त्र सुतः महत्तमश्रीरामदेव स्वार्थ-परार्थहेतवे बोधिचर्य्यावतारपुस्तिका लिखापिता। सद्धौद्धकरण कायस्थ-ठकुर-अमिताभेन लिखितमिदं वेनुग्रामे। विक्रमादित्यदेव सं १४९२ फाल्गुन शुदि ४ कुजे शुभमस्तु सर्व्वजगतः परहितोनिरताभवन्तु सन्तः ॥[1]

The characters are exactly similar to those found in the inscriptions of the Baidyanātha temple at Deoghur. The combination of Venugrāma with Sohiñcari shows that the Venugrāma is modern Berugrama in Pergannah Haveli. Sohincari is no doubt the Sanscritised form of Sāncar. This fact shows that the Ārsā Sājlā Mankhbad extended up to the confines of the modern District of Birbhum. Nothing yet is known about Simlābād and Mihirbak.

Satganw in Bengali Literature.

The earliest Bengali works containing a reference of Saptagrāma is the Caṇḍi Kāvya of Mukunda Rāma, but no trustworthy manuscripts of this work are available, and the existing printed editions are utterly unreliable. The Bangīya Sāhitya Pariṣat are trying to secure a copy of this work which is said to be the autograph copy of the poet himself. A poem in honour of the serpent goddess *Manasā* incidentally describes Saptagrāma. The poet is a contemporary of Husain Shāh, and the work is dated 1417 Śaka. The colophone runs thus :—

মুকুন্দ পণ্ডিত যুত বিপ্রদাস নাম
চিরকাল বসতি বাদুড্যা বটগ্রাম
যুক্লা দসমী তিথি বৈশাখ মাসে
সিঅরে বসিয়া পদ্মা কহিলা উপদেশে
কবিগুরু ধিয়জনে করি পরিহার
রচিল পদ্মার গিত সাস্ত্র অনুসার
সিন্ধু ইন্দুবেদ মহি সক পরিমাণ
নৃপতি হুসেন সা গৌড়ে যুলক্ষণ।[2]

(For translation see Postcript A.)

The poet Bipradāsa describes Saptagrāma in the chapter on the voyage of the Merchant prince Candra :—

" যুহিত্র চাপাযা কুলে চাঁদ অধিকারি (ব) লে দেখিব কেমন সপ্তগ্রাম
তথা সপ্ত রিসি স্থান সর্ব্বদেব অধিষ্ঠান সোক দুখ সর্ব্ব গুণধাম ॥
জোতি হৈয়া একমুতি রিসি মুনি সেবে ভথিঃ তপ জপ করে নিরন্তর ॥
গঙ্গা আর সরস্বতি জমুনা বিসাল অতি অধিষ্ঠান উমা মহেশ্বরি।

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[1] This date is irregular, and appears to correspond to Tuesday, the 12th February, 1426 A.D.—T. B.

[2] For a further description of this work see Proc. A.S.B., 1893, p. 20.

দেখিয়া ত্রিবিনি গঙ্গা চাদরাজা মনে রঙ্গা কুলেতে চাপয়ে মধুকর
আনন্দিত মহারাজ করে নৃপতি তির্থিকাজ ভক্তিভাবে পূজে মহেশ্বর
তির্থকার্য্য সমাপীয্যা অন্তরে হরি (ষ) হয্যা উঠে রাজা ভূমিয়া নগর
ছত্তিষ আশ্রমে লোক নাহি কোন দুঃখ সোক আনন্দে বঞ্চয়ে নিরন্তর
বৈসে জতো দ্বিজগণঃ সর্ব্বশাস্ত্রে বিচক্ষণ তেজময় জেন দিবাকর
সর্ব্বতত্ত্ব জানে মর্ম্মে বিসারদ গুরু ধর্ম্মে জ্ঞানগুরু দেবের সোষর ॥
পুরুস মদন জেনো রমনি সাবিত্রি হেনো অভরন সব সর্ব্বময়
তার রূপ গুন জতো তাহা বা বলিব কতো হেরিতে নিমিষ বিলয়
অভিনব ষুরপুরি দেখি ঘর সারি ২ প্রতি ঘরে কনকের ঝারা
নানারত্ন অবিসাল জোতিময় কাচচাল রাজমুক্তা প্রলম্বিত ঝারা
সভে দেবে ভক্তিমুতিঃ প্রতিঘরে নানামূর্ত্তি রত্নময় সকল প্রসাদে
আনন্দে বাজায় বার্দ্দিঃ সঙ্ক ঘণ্টা মৃদাঙ্গ আদি দিখি রাজা বড়ই প্রমাদে
নিবষে জবন জতো তাহা বা বলি কতো মঙ্গল পাঠান মোকাদীম
ছয়দ মোল্লা কাজিঃ কেতাব কোরাণ রাজি দুই ওক্ত করে তছলিম
মসিদ মোকাম ঘরেঃ সেলাম বাজায় করে ফয়তা কবরে পিত্য (নিত্য) লোকে
বন্দিয়া মনসা দেবিঃ দ্বিজ বিপ্রদাষ কবি উদ্ধারিয়া ভকত সেবকে। [1]

The statement of this author proves that the city of Saptagrāma extended up to Triveṇī. The statement of another author proves that it extended up to the Ganges :—

সপ্তগ্রাম জে ধরণি নহি তুল। চালে ২ বৈসে লোক ভাগিরথির কুল ॥
নিরবধি যজ্ঞদান পুণ্যবান লোক। অকাল মরণ নহি (নাহি) দুখ সোক ॥
যক্রজিত রাজার নাম তার অধিকারী। বিবরিএ জত গুণ বলিতে (না) পারি
নিমল জসের সষি প্রতাপের তপন। জিনিয়া অমরাপুরি তাহার ভবন ॥ [2]

The date of this manuscript is uncertain, and the work as preserved in the Society's Library is in a fragmentary condition. Śakrajit or Śatrujit seems to have been one of the zemindars of Saptagrāma, like Hiraṇya and Govardhana described in the Caitanya-Bhagavata and the Caitanya Mangala. There are two shrines of the followers of Caitanya amidst the ruins of Saptagrāma. A couple of hundred yards from the tomb of Jamāluddin stands the shrine of Uddhāraṇa Datta, one of the twelve apostles of modern Vaiṣṇavism. The only remarkable feature in this shrine is a gigantic *Mādhavīlatā* under which Nityānanda used to sit. The trunk is about 24 inches in circumference, the usual circumference of the stem being in fractions of an inch. The shrine and enclosures are quite modern. About a mile from this place stands a ruined monastery about four-hundred years

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[1] Manasā Maṅgala of Bipradās Ms., *Ga* 3530. In the Asiatic Society, of Bengal.

[2] *Saṣṭhimaṅgala by Kṛṣṇa Rāma MS.*, *Ga* 5674, in the Library of the Asiatic Society.

old. The monastery ends in a noble flight of steps descending into the bed of the Sarasvati. This is the shrine of Raghunātha Dāsa, a poet famous in Vaiṣṇava literature (Pl. VI). Most of the rooms are roofless, and in the extensive court-yard an old man of the Sahajiyā sect ekes out a precarious livelihood from the scant generosity of the neighbouring villagers. In a small room adjoining the shrine is an oblong piece of stone measuring about 36 by 48 inches on which Raghunātha Dāsa is said to have attained Siddhahood. From the shrine of Raghunātha Dās passing eastwards along the course of the Sarasvati one comes to a huge mound of bricks which according to the local tradition are the ruins of the citadel of Saptagrāma (Pl. VII).

About a quarter mile from the tomb of Jamāluddin buried in the heart of the dense thicket and cane brakes there is a stump of a stone pillar once belonging to a mosque. The surrounding grounds are strewn with pieces of sculptures and brick works. The whole of the area extending from Trisbighā to Triveṇi is strewn with bricks and intersected with paved road-ways where the vegetation is less dense and not so high. The whole area stands in an awe-inspiring gloom, a silent witness to the devastations of time.

The final ruin of Sātgānw seems to have been brought about by the silting of the river Sarasvati. Probably the main stream of the Bhagirathi flowed on to the sea through this channel before the appearance of Europeon nations in India. Even now large anchors, chains, cables and ropes of immense size are found in the bed of this river. The river-bed first below Raghunātha Dāsa's monastery is about 500 yards in breadth. But the whole of this area is under cultivation. A very small stream four to five feet in breadth meanders through its old bed, and in some places in the District of Howrah has been choked up altogether. Several persons in the village of Trisbigha acknowledged the discovery of anchors, chains, cables, and even gold and silver coins from the river bed. But no amount of persuasion could make them sell or show any of these relics. The old Vaiṣṇava, who now resides amidst the ruins of Raghunāth Dāsa's monastery swore that an earthen pot full of coins have been found on the river bank between the monastery and the port, but had been appropriated by the Khadim or Mutwali of Jamaluddin's masjid. The last Khadim died years ago, and no successor has yet been found. The Wākf lands are now in the possession of a Hindu, and all claims of the Mahomedans have since been barred by limitation. Close to the spot where we found a stump of a stone pillar (Pl. IX) we found several large blocks of stones. Following these stones we came to the banks of the river where we found several mounds of bricks on the river side; these were the ruins of a once noble flight of steps descending to the bottom but all gone to pieces now and fast crumbling away. In my infancy my father used to point out a heap of black stones near the railway bridge on the Sarasvati while passing on the East Indian Railway, and I made a strenuous attempt to reach this spot, but the thick under-

growth and the intertwining cane brakes resisted all attempts at further progress. The stones are no longer visible from the railway as the fast-growing vegetation had covered it up long since.

When the Portuguese first visited Bengal, the Sāyyid or Husaini dynasty reigned in Bengal.[1] One of the reasons of the ruin of Sātgānw was the downfall of the independent kingdom of Bengal. The Portuguese had begun to frequent Bengal by the year 1530. Eight years later the last king of the Husain dynasty, Sultan Ghiaṣuddin Mahmud Shah, who is referred to as *El-rey Mamude* by Du Barros in his Da Asia, was ousted from his kingdom by Fakhruddin Sher Shah. The subsequent amalgamation of Bengal in the last Empire of the Pathans served to hasten the ruin of Sātgānw. In the year 1540, its harbour was becoming difficult of access for ships. The growing influence of the Portuguese was driving away all honest enterprise from the port.[2] The growing Portuguese trade and the increasing shallowness of the river Sarasvati necessitated a change of route for the incoming ships. The only alternative route was by the Bhāgirathī, which was not deep enough for large sea-going vessels. This, again, necessitated a transhipment from the larger sea-going ships to smaller vessels, which gave rise to Betur and ultimately to Calcutta. The words of the Portuguese travellers imply that the Sarasvátī was once navigable by large vessels and its harbour deep enough for them to stand at anchor.[3] The last coin struck at the Sâtgānw mint is dated A.H. 957 or 1550 A.D. Fifteen years later Cæsar Fredrick found it still a reasonable fair city abounding with all things.[4] Nothing is known of Sātgānw during the temporary independence of Bengal under the later Suri and Kararāni Sultans. With the final conquest of Bengal by the Mughals, the last blow was dealt to Sâtgānw by Emperor Akbar. The permission given to Captain Tavarez to erect a permanent town near Hughly brought about the desertion of Sâtgānw. At this time the whole of the Indo-European trade had passed on to the hands of the Portuguese. Malay and other eastern trade had most probably given up the coasts of Bengal on account of Portuguese depredations The only remaining traffic was between the native Indian merchants and the Portuguese. With the permanent establishment of the Portuguese in Hughly, the majority of Indian traders also must have left the port. Sātgānw appears as a Sirkar in the rent roll of Toḍaramalla.[5] The ruin of the Portuguese settlement at Hughly brought about by Shahjahān paved the

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[1] Early Annals of the English in Bengal, vol. i, p. 132.

[2] "The Portingalles . . . . . live in a manner like wild men and untamed horses, or that every man doth there what he will, and every man is lord, neither esteem they anything of justice whether there be any or none"—Voyage of Van Linschoten (Hakluyt Society), vol. i, p. 95.

[3] *Ibid.*, p. 134.

[4] Caesar Fredrick (Hakluyt Society), vol. i, p. 230.

[5] Jarrett's translation of the Ain-i-Akbari, vol. ii.

way for the future Fauzdarship of Hughly. In the seventeenth and eighteenth centuries we find the old trade of Sātgānw divided among the various European settlements along the river—Hughly, Chinsurah, Chandernagore, Serampur and Calcutta.

Porto Pequeno was the name which the Portuguese gave to their new settlement.[1] Among the products of Sātgānw species of quilts wrought with yellow silk had been specially and repeatedly mentioned in the records of the earlier decades of the seventeenth century.[2]

The only place of interest to the general body of the Indian people amidst the ruins of ancient Sātgānw is the confluence of the three rivers. The Yamunā forks out into two branches near the Ganges. One of these falls slightly above and the other slightly below the confluence of the Sarasvatī with the Ganges. The majority of the pilgrims assemble on the western bank of the river for bathing purposes. Curiously enough the bathing takes place some five-hundred yards up the river and not at the junction of the Ganges and the Sarasvati. At Prayāga, near Allahabad, the bathing takes place at the spot where the bluish water of the Yamuna mixes with the muddy stream of the Ganges, producing an effect difficult to describe. At Satganw Tribeni, the bathing should be done below the junction, or at the junction, but not above the river. It seems that in earlier days the bathing was performed immediately below the Darga of Zafar Khan. The riverbed here is strewn with bricks, stones and pebbles, which may be the remains of a ghat. The abode of the Seven Ṛṣis mentioned by Bipradāsa in his description of Sātgānw is still pointed out at this place. After the Mahomedan conquest, the spot must have been changed out of sheer necessity. And the present spot was chosen in the absence of a suitable site near the junction. During the earlier period of Mahomedan domination in Bengal, Triveṇi, and consequently Sātgānw, was wrested from the Mahomedans by the Hindu Kings of Orissa. The Orissan conqueror Mukunda Deva built the spacious flight of steps now existing. To him also is attributed the building of the great embankment on which the road from Magra to Triveṇi has been laid. The influence of Orissa is still prominent at Triveni. The majority of attendants in the small groups of shrines clustering around the ghat are Oṛiyâs.

There is a good road from Trisbighā station to Bansberia and Tribeni, of which the portion between Bansberia and Tribeni is metalled. Between Trisbigha and Bansberia there are small groups of huts. They are the remains of the ancient divisions or quarters of the city and still bear their ancient names such as Mālāpārā, Kāgchipārā, etc. Between Trisbighā and Bansberiā I counted a couple of big tanks, while small ponds and ditches are to be met with at every turn. At Trisbighā itself there are several fine tanks. Four large tanks are to be seen on the four sides of the modern shrine of Uddhāraṇa Datta. One of these

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[1] Ralph Fitch (Hakluyt Society), vol. vi, pt. i, p. 257.
[2] The English Factories in India by William Forts, pp. 195, 198, and 206.

is known as the Nupura Kuṇḍa. It is said that the gold bangles from the feet of the lord Nitayānanda fell into the waters of this tank while he was disporting himself in it during the period of his residence with Uddhāraṇa Datta. There is no mention of the occurrence in the Bhakti Ratnākara by Narahari Cakravarti who describes the meeting between Nityānanda and Uddhārana Datta in the following words :—

নানা গ্রামে লোকের করিয়া দুঃখ দূর,
সপ্তগ্রামে হৈল শুভ গমন প্রভুর ॥
উদ্ধারণ দত্তে প্রভু কৈল আত্মসাৎ,
তথা যে বিলাস তাহা জগতে বিখ্যাত ॥

তথাহি তত্রৈব ॥

উদ্ধারণ দত্ত ভাগ্যবন্তের মন্দিরে
রহিলেন মহাপ্রভু ত্রিবেণীর তীরে ॥
কায়মনোবাক্যে নিত্যানন্দের চরণ
ভজিলেন অকৈতবে দত্ত উদ্ধারণ ॥
নিত্যানন্দ স্বরূপের সেবা অধিকার
পাইলেন উদ্ধারণ কিবা ভাগ্য আর ॥
জন্ম ২ নিত্যানন্দ স্বরূপ ঈশ্বর
জন্ম ২ উদ্ধারণ তাঁহার কিঙ্কর ॥
যতেক বণিক কুল উদ্ধারণ হৈতে
পবিত্র হৈল দ্বিধা নাহিক ইহাতে ॥
বণিক তারিতে নিত্যানন্দ অবতার
বণিকেরে দিলা প্রেমভক্তি অধিকার ॥
সপ্তগ্রামে প্রতি বণিকের ঘরে ২
আপনে শ্রী নিত্যানন্দ কীর্ত্তন বিহরে ॥
বণিক সকল নিত্যানন্দের চরণ
সর্ব্বভাবে ভজিলেন লইয়া শরণ ॥
বণিক সবার কৃষ্ণ ভজন দেখিতে
মনে চমৎকার পায় সকল জগতে ॥
নিত্যানন্দ মহাপ্রভু মহিমা অপার
বণিক অধম মূর্খে যে কৈল উদ্ধার ॥
সপ্তগ্রামে নিত্যানন্দ মহামল্ল রায়
গণসঙ্গে সঙ্কীর্ত্তন করেন লীলায় ॥
সপ্তগ্রামে যত হৈল কীর্ত্তন বিহার
শত বৎসরেও তাহা নারি বর্ণিবার ॥
পূর্ব্বে যেন সুখ হৈল গোকুল নগরে
সেইমত সুখ হৈল সপ্তগ্রাম পুরে ॥

বণিকের সৌভাগ্য জানিবে কুন জন
ঐছে বহু বর্ণিলা ঠাকুর বৃন্দাবন ॥
উদ্ধারণ দত্ত প্রেমে মত্ত নিরন্তর
করেন প্রভুর সেবা আনন্দ অন্তর ॥
সপ্তগ্রামে মহাতীর্থ ত্রিবেণীর ঘাটে
দেখে নানা রঙ্গ রহি প্রভুর নিকটে ॥
যে ২ স্থানে প্রভু নিত্যানন্দের বিজয়
সে সকল স্থান হন সর্ব্বতীর্থময় ॥
গৌড়ভূমে যত তীর্থ কে করু গণন
প্রভু সঙ্গে সর্ব্বতীর্থ ভ্রমে উদ্ধারণ ॥[1]

Summary of Contents.—"Having relieved the sufferings of the people in many villages the lord came to Saptagrāma. He appropriated Uddhārana Datta, and his sojourn there is well known. The lord took his abode in the house of the fortunate Uddhārana Datta on the banks of the Tribeni. Uddhārana nursed the foot of Nityānanda with great devotion. All the merchant families were purified through Uddhārana. Nityānanda went to the house of every merchant in Saptagrāma singing holy songs (Kirttana). The Kirttana which took place at Saptagrāma at this time cannot be described in a century. Uddhārana Datta, mad with love, nursed the lord with a glad heart. The great holy place at Saptagrāma is the ghat at Triveṇi. There he observed the festivities with the lord. The places associated with Nityānanda are to be regarded as holy as all the holy places put together. Who can count the holy places in the land of Gauḍa. Uddhāraṇa travelled through all these holy places with the lord."

To the south of Jamaluddin's tomb there is a large tank about half a mile in length and more than fifty feet in depth. This is the only tank which possesses a fair supply of water throughout the year. Several tanks of fair proportions are also to be noticed on either side of the road from the station to the Grand Trunk Road. The Grand Trunk Road passes through the bed of one or two of the largest tanks. The road passes through the north-western corner of the port. An old man of the Bāgdi caste pointed out the moat of the port to us. Its breadth is 20 to 30 feet. But it is so full of cane brakes that it is very difficult to judge the present depth. The man said that while the excavation was going on to sink the piers of the bridge which now carries the Grand Trunk Road over the Sarasvati several large earthen vessels were discovered at a depth of eight to ten feet below the ground level. Two of these were full of a sticky black liquid giving out a very pungent smell, while the rest were full of grain husks. Passing along the course of the Sarasvati to

[1] Bhakti Ratnākara, edited by Rama Nārāyana Vidyāratna, Berhampore, 1887 A.D., pp. 538-39.

the point of its junction with the Ganges, one comes upon the ruins of a large bridge, after passing the modern suspension bridge carrying the road from Bansberia to Triveṇī. This most probably is the bridge built by Ulugh Masnad Hindhu Khan in 1505 A.D. referred to above. The inscription itself has been stuck in the walls of the masjid of Zafar Khan at Tribeni. This proves that the mihrabs of the masjid are not very old. The one containing the inscription of Zafar Khan is probably the only structure still remaining of Zafar Khan's building.

NOTE BY DR. T. BLOCH.

The following is a transcript of the Arabic inscription (Pl. VIII) referred to on page 251, above :—

1 بســـم الله الرحمن الرحيم و تمم بالخير

2 تبارک الله احسن الخالقين خالق الخلق و منشي السحاب و منزل الرعد ...

3 تبارک الذي بيده الملک و هو على کل شيء قدير الذي خلق الموت و الحيوة ليبلوکم ايکم احسن عملا *

4 تبارک الذي نزل الفرقان على عبده ليکون للعالمين نذيرا تبارک الذي ان شاء جعل لک خيرا من ذلک جنات تجري من تحتها الانهار وجعل لک قصورا *

5 تبارک الله احسن الخالقين يا الهي و اله السموات السبع و ما فيهن و اله الارضين السبع و ما فيهن ... وصل على نبي محمد و على من بالجنة و نجني من النار انک ؟

6 انک المعطى المنان هذا الصراط سلطان العادل و البازل علاء الدنيا و الدين ابو المظفر حسين شاه السلطان خلد الله ملکه و سلطانه *

7 بذا کردة خان اعظم خاقان معظم بهلول عصرو الزمان الغ هندهوخان سرلشکر و وزير حسيناباد و عرصه ساجلا منکهه باد و سرلشکر تهانه لابلا في غرة شهر رجب [المرجب] مورخا احد عشر و تسعمائه سنه ٥ *

It will be seen from this transcript that the inscription [1] refers to the building of a bridge (*ṣirāṭ*) in the time of 'Alā'ud-

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[1] To build bridges evidently was a meritorious act to the Muhammadans as well as to the Hindus. There is another Arabic inscription on a bridge on the road from Englishbazar to Gaur in the district of Maldah. It refers to the time of the Bengal Sultan Jalāluddin Muḥammad Shāh, if I remember correctly.

dīn Husain Shāh. The date of the inscription, the 1st Rajab 911 A.H., corresponds to the 31st October, 1505 A.D. The builder was "the great Khān, the exalted Khāqân, the hero (*pahlan*) of his age and time, Ulugh Hindhū Khan." He was a "military Commander and Governor (*Sar-lashkar-ō-Wazīr*) of Husainābād and the district of Sājlā Mankhbād; also a military Commander (*Sar-lashkar*) of the Thāna Lāoblā."

T. Bloch.

Postscripts.

I add this postscript containing the translations of the Bengali extracts quoted above at the request of Dr. T. Bloch, Ph.D., of the Archæological Survey:—

A. "Bipradāsa was the son of Mukunda Pandit, who resided for a long time at Baduṛyā Vaṭagrāma. On the 10th day of the waning moon in the month Vaiśākha, Padmā, the goddess of serpents, sitting near his head, gave him inspiration. Taking no heed of wise men and master-poets, he wrote songs in honour of Padmā according to the Laws. In the Śaka year, the earth, the Vedas, the moon and the seas, *i.e.*, 1417 (1495 A.D.), Husena Sā (*Husain Shāh*) with auspicious signs, was the reigning monarch in Gaur."

B. "The merchant Cā̆d anchoring his fleet on the banks said that he would like to see Saptagrāma, where there is a place sacred to the Seven Ṛṣis, where all gods reside, where there is (no) sorrow and no misery, and which is the abode of all that is good. All mendicants with one mind served the Ṛṣis and Munis, and incessantly practised austerities. The Ganges, the Jamuna, and the Sarasvati are wide rivers presided over by Uma and Māheśvarī. Seeing the Ganges in three streams the prince Cā̆da was delighted, and brought his Madhukara (boat) near the bank. With great glee he performed the sacred rites due to a place of pilgrimage and worshipped Maheśvara. Having finished these, cheerful at heart he roamed about in the city. Men in thirty-six different stages of life lived there without knowing sorrow or misery. Brāhmaṇas lived there, learned in all the Śāstras and brilliant like the Sun. They know all that is true, and are experts in the works of spiritual guides, teachers of knowledge, rivalling the gods. Men were like cupids, women like *Sāvitrī*, and adorned with all sorts of golden ornaments. How can I describe their physical and moral beauty? The eyes refuse to wink at their sight. It is like a new heavenly city. The houses are in rows, and in every house there is a golden fountain (or shower-bath). Bright gabled roofs made of glass with various gems in profusion and hanging fringes of royal pearls. Everyone serves the gods with feelings of devotion. In every house there are various images, and in every palace there are images made of gems. They play on various musical instruments, conches, bells, drums, etc. Seeing these the merchant prince rejoiced. How am I to describe

the Yavanas that live there, the Mongols, the Pathans and etc., Sayyids, Mullahs and Qazis, expert in books and in the Qurān, who pray twice (*sic*) a day. In masjids and houses and places of business they make their salaams every day, and make offerings to the people. Having made his obeisance to the goddess Manasā, the Brahmana poet Bīpradāsa prays that her worshipper might be saved."

C. "Nothing in the world is equal to Saptagrāma. People live on the banks of the river Bhāgirathi so close, that their thatches meet. Virtuous men make gifts and perform sacrifices without end. There is no untimely death, no sorrow and no misery. Its owner is a king named Śakrajit. I cannot expatiate on his good qualities. He is the veritable moon of white and spotless fame. His dwelling surpasses the palaces in heaven."

JULY, 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 7th July, 1909, at 9-15 P.M.

SIR THOMAS HOLLAND, K.C.I.E., D.Sc., F.R.S., F.G.S., President, in the chair.

The following members were present:—

Babu Rakhal Das Bannerji, Prof. P. J. Brühl, Mr. I. H. Burkill, Babu Nilmani Chakravarti, Mr. L. L. Fermor, Rai Bahadur Matilal Ganguli, Mr. H. G. Graves, Mr. H. H. Hayden, Mr. B. G. Horniman, Dr. W. C. Hossack, Mr. C. H. Kesteven, Mr. A. H. Lewes, Dr. Indumadhab Mallick, Captain C. L. Peart, I.A., Rev. A. C. Ridsdale, Mahamahopadhyaya Haraprasad Shastri, Prof. E. Sommerfeldt, Captain F. H. Stewart, I.M.S., Dr. G. Thibaut, C.I.E., Mr. G. H. Tipper, Kaviraj Jogindranath Sen, Vidyabhusana, Mr. W. A. Wood, Rev. A. W. Young.

The minutes of the last meeting were read and confirmed.

Sixty-two presentations were announced.

The Council reported that no meeting was held in June as a quorum of members was not present.

The General Secretary reported:—

1. That Miss Cornelia Sorabjee, Dr. E. Houseman, Munshi Jwala Sahai, and Captain J. H. Morgan, I.A., had expressed a wish to withdraw from the Society.

2. That Prof. Michael Jan DeGoeje, an Honorary Member of the Society, was dead.

The President announced:—

1. That Major C. R. Stevens, I.M.S., had withdrawn his resignation of membership.

2. That Prof. E. P. Harrison had been appointed a member of the Council, in the place of Prof. J. A. Cunningham, resigned; and Dr. G. Thibaut as Acting Philological Secretary *vice* Dr. Satis Chandra Vidyabhusana, gone on deputation.

The proposal to create a distinction among the members of the Society, and of obtaining official recognition for the Society as a Metropolitan Institution, of which intimation had already been given by circular to all members, was brought up for final disposal.

The votes of the members were laid on the table and the President requested any members, who had not expressed their opinions, to take the present opportunity of filling in voting

papers. Several such papers were filled in, and with the votes returned by members, were scrutinized. The President appointed Messrs. H. H. Hayden and A. H. Lewis to be scrutineers. The scrutineers reported as follows :—

For the proposal	.. ..	83
,, Signatures illegible	..	2
,, Reservations as regards details	.. ..	6
Against the proposal	.. ..	5
For Col. Green's amendment	..	22
TOTAL	..	118

Carried.

The following seven gentlemen were balloted for as Ordinary Members :—

Major E. E. Waters, I.M.S., Presidency General Hospital, proposed by Lieut.-Col. F. J. Drury, I.M.S., seconded by Lieut.-Col. F. P. Maynard, I.M.S.; *Maulavi Abdur Rahim*, Inspector of Police, Alipur, proposed by Maulavi Abdul Wali, seconded by Babu Rakhal Das Banerji; *Mr. Rangnath Bazuz*, proposed by Babu Roormall Goenka, seconded by Dr. Satis Chandra Vidyabhusana; *Dr. Shib Nath Bhattacharjee*, M.B., Junior House Surgeon, Medical College, proposed by Major L. Rogers, I.M.S., seconded by Mahamahopadhyaya Haraprasad Shastri; *Mr. R. C. Bonnerjee*, proposed by Mr. G. H. Tipper, seconded by Mr. E. Vredenburg; *Captain H. Emslie Smith*, I.M.S., Offg. Prof. of Chemistry, Medical College, proposed by Lieut.-Col. F. P. Maynard, I M.S., seconded by Major L. Rogers, I M.S.; *Mr. W. S. Milne*, I.C.S., proposed by Major L. Rogers, I.M.S., seconded by Mr. I. H. Burkill.

Babu Rakhal Das Bannerji showed twenty-five lantern slides on Sculptures of the Mathura School.

The following papers were read :—

1. *History of Kashmir.*—*By* PANDIT ANAND KOUL. *Communicated by the Philological Secretary.*

2. *King Gopichandra of Rungpur.*—*By* BISVESVAR BHATTACHARJEE.

3. *Extent of the Pala Empire.*—*By* MAHAMAHOPADHYAYA HARAPRASAD SHASTRI.

These three papers will be published in a subsequent number of the *Journal.*

4. *Some Notes on Mineralogy—Measurement of Angles in Crystals.*—*By* PROF. E. SOMMERFELDT.

Websky's geniometer was the standard instrument for measurement of angles in crystals for a long time, but the

idea of using instruments similar to the well-known theodolite made progress more and more during the past twenty years. The difference between the two types of instrument is, that there is one circle in Websky's geniometer and two in the theodolite-geniometer. It is possible to use Websky's geniometer like a theodolite-geniometer if there is added a second circle.

Mr. Stoeber has constructed such a circle, but Stoeber's instrument is only applicable for rough measurements, as it is not possible to center and adjust the crystal. I devised a more complete apparatus, which I have here. The centering and adjusting parts are in the interior of the circle. The apparatus is constructed by Mr. Buchler, Scientific Instrument Maker, at Tuebingen.

5. *The Shou (pronounced Siau) or Tibetan Stag.—By* Lieut.-Col. J. Manners-Smith.

This paper will be published in a subsequent number of the *Journal.*

6. *The Loranthus Parasite of the Moru* (Quercus dilatata) *and Ban* (Quercus incana) *Oaks.—By* E. P. Stebbing.

This paper has been published in the *Journal* for July, 1909.

7. *The Rubaiyat of Abu Said bin Abul Khyr.—Edited by* Maulavi Abdul Wali.

8. *Decomposition of Ammonium Platinchloride and Platinbromide under the influence of Heat.—By* Prafulla Chandra Ray *and* Atu Chandra Ghose, M.A., *Research Scholar, Presidency College.*

9. *A Translation of Subandhu's Vasavadatta.—By* Harinath De.

10. *Date of Visvanatha Tarkapanchanana.—By* Mahamahopadhyaya Haraprasad Shastri.

These four papers will be published in a subsequent number of the *Journal.*

—◇—

The Adjourned Meeting of the Medical Section of the Society was held on Wednesday, July 14th, 1909, at 9-30 P.M.

Lieut.-Colonel A. H. Nott, I.M.S., in the chair.

The following members were present:—

Dr. Birendra Nath Ghosh, Lt.-Col. C. R. M. Green, I.M.S., Dr. W. C. Hossack, Major J. G. Jordan, I.M.S., Captain D. McCay, I.M.S., Dr. Indumadhab Mallick, Captain J. W. Megaw, I.M.S., Major J. C. Vaughan, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitor :—Dr. S. N: Bhattacharjea.

The minutes of the last meeting were read and confirmed.

The following paper was read:—

Notes on Smallpox.—By MAJOR J. C. VAUGHAN, I.M.S.

The following members joined in the discussion: Lt.-Cols. Nott, Green; Dr. Hossack, and Dr. Ghose.

THE MĀZAR OF ZAFAR KHAN.
View from the North.

Survey of India Offices Calcutta 1909

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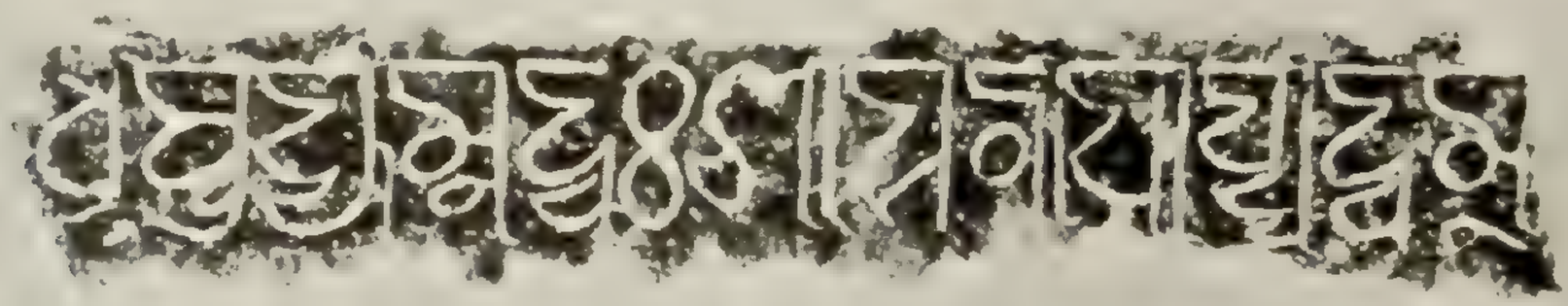

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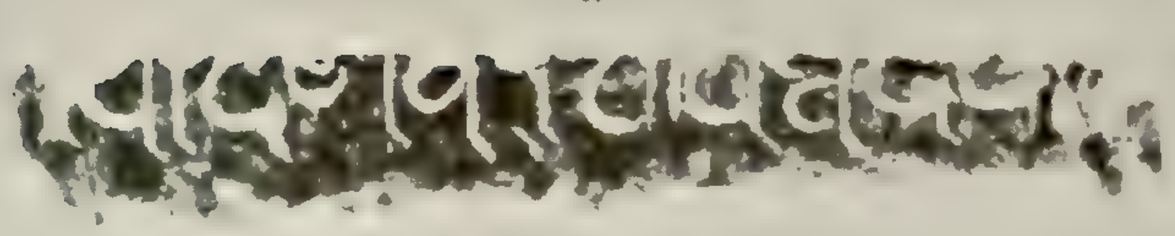

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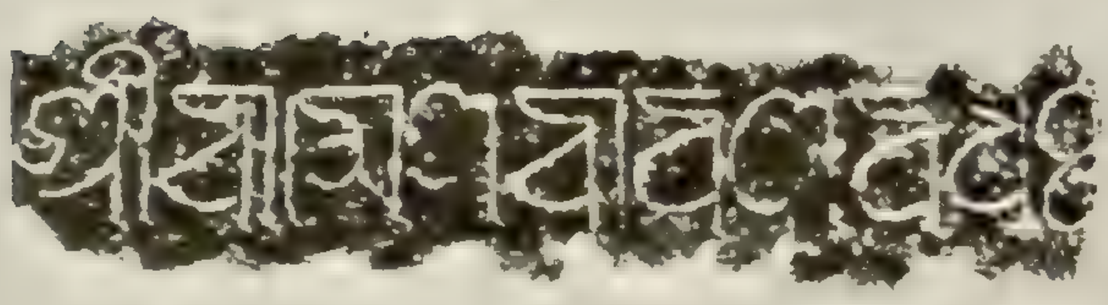

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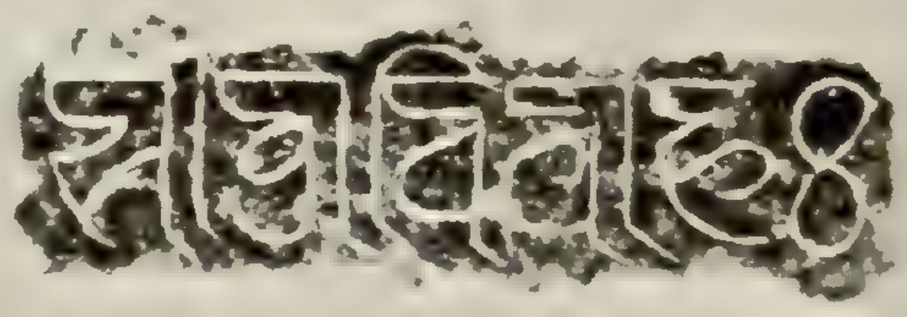

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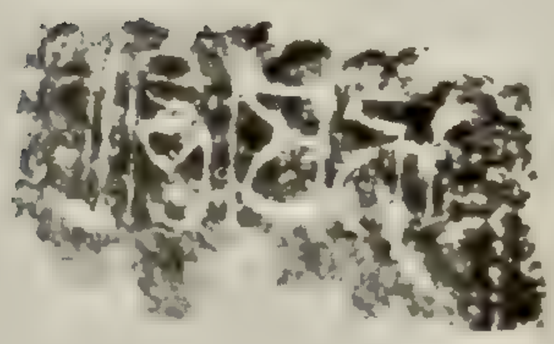

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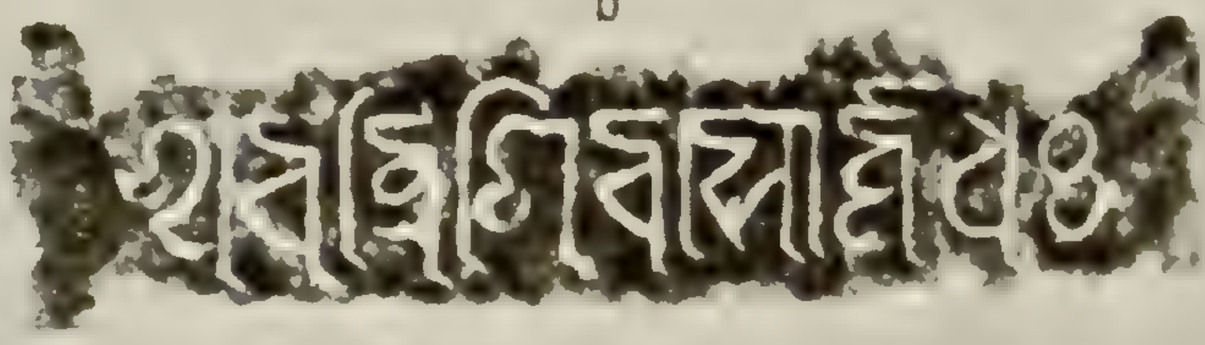

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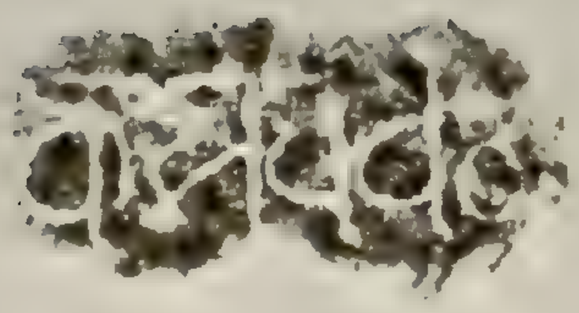

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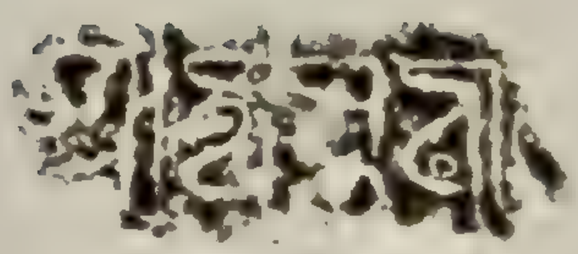

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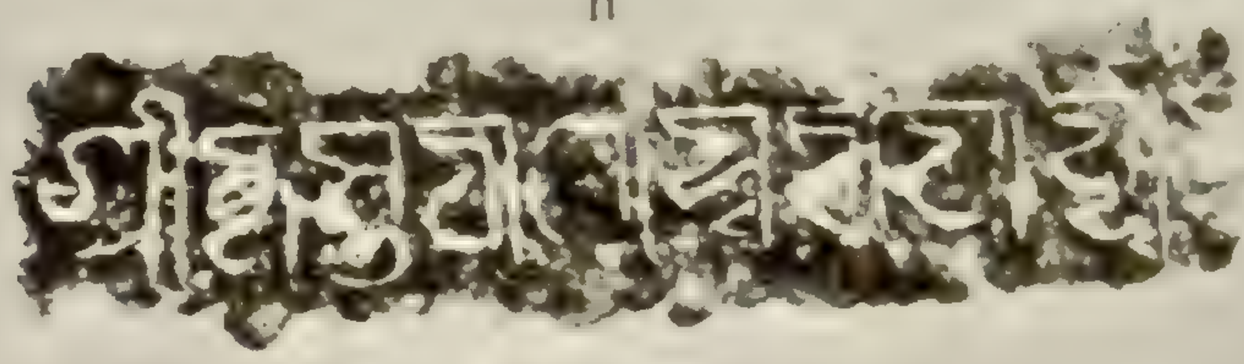


MIHRĀB IN THE MOSQUE AT TRIVENĪ.

MOSQUE AT PANDUAH.

RUINED MONASTERY ON THE SARASVATI.

RUINS OF THE FORT FROM THE BED OF THE SARASVATI.

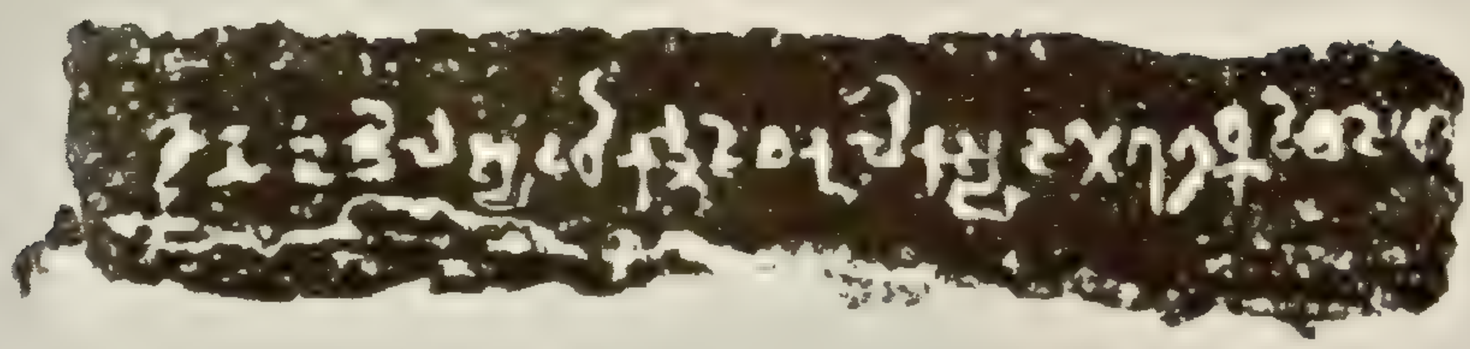
INSCRIPTION OF 'ALAUDDĪN HUSAIN SHĀH.
911 A. H., AT TRIVENĪ.

STONE PILLAR IN THE JUNGLE NEAR TRISHBIGHA STATION.

Journ. As. Soc., Beng., Vol. V. PLATE IX.

Half-tone. Survey of India Offices, Calcutta.

I



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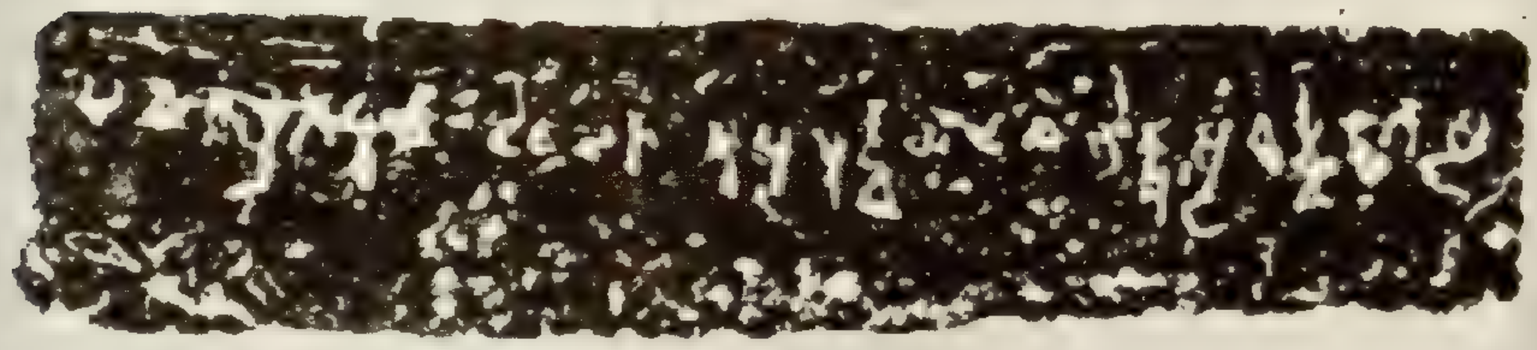

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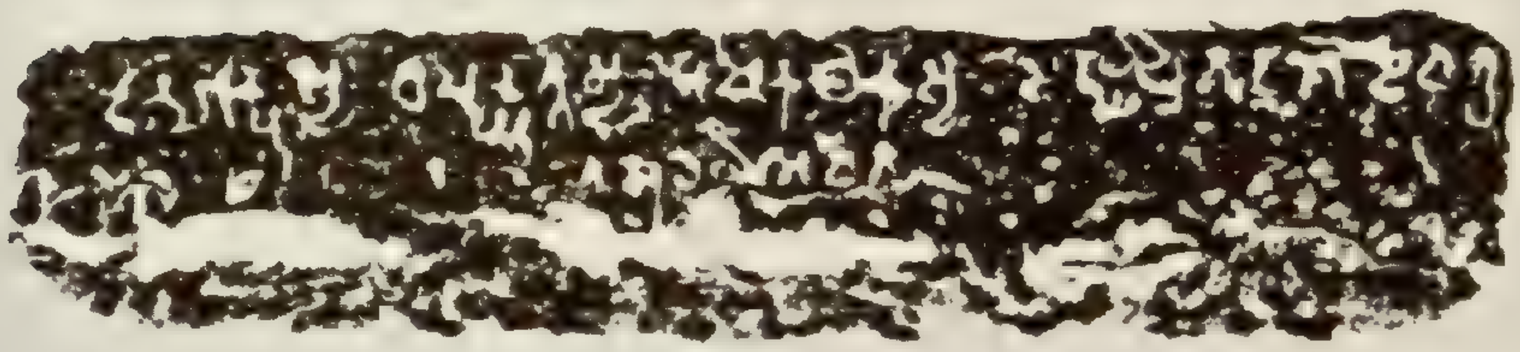

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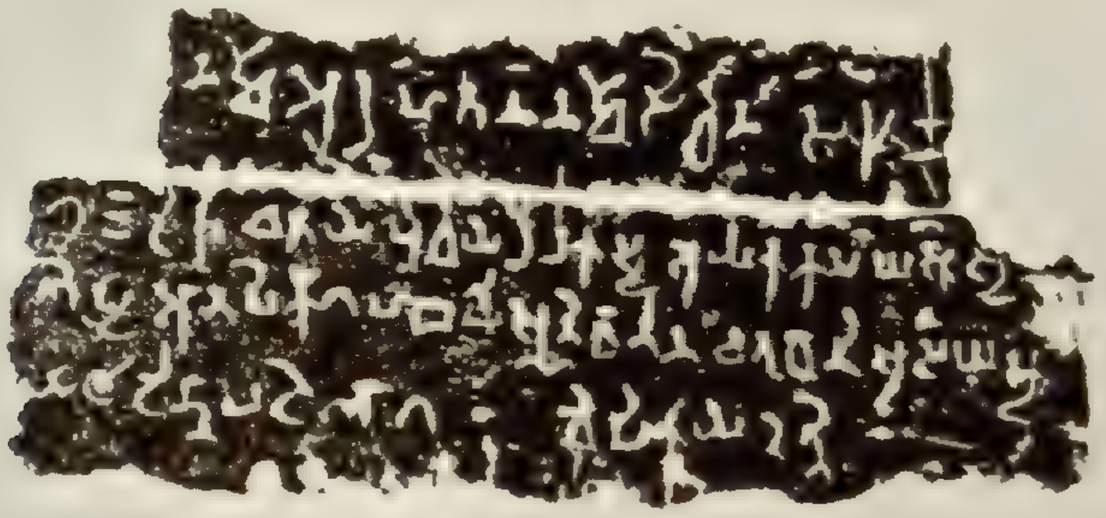

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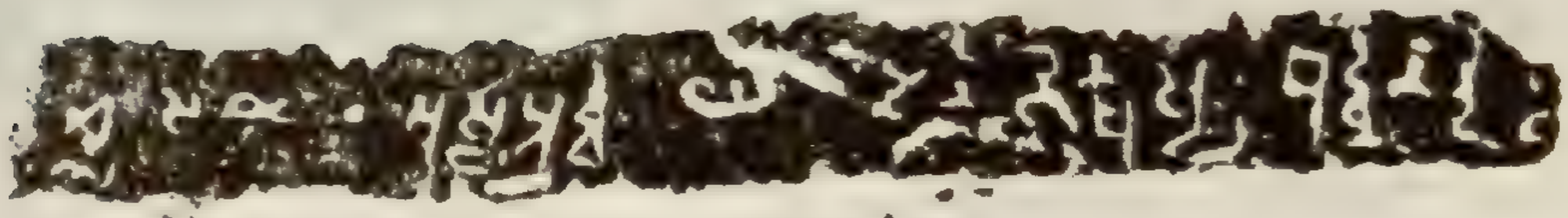

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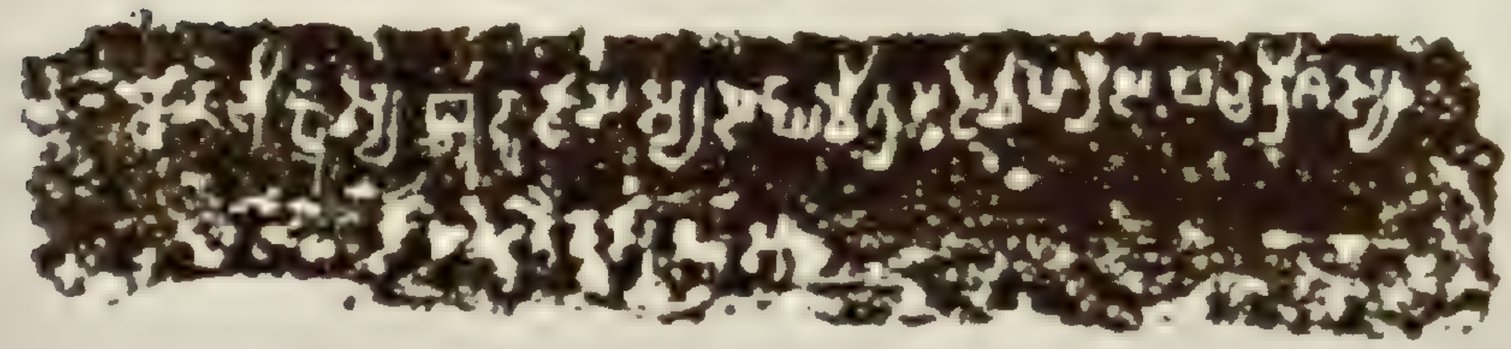
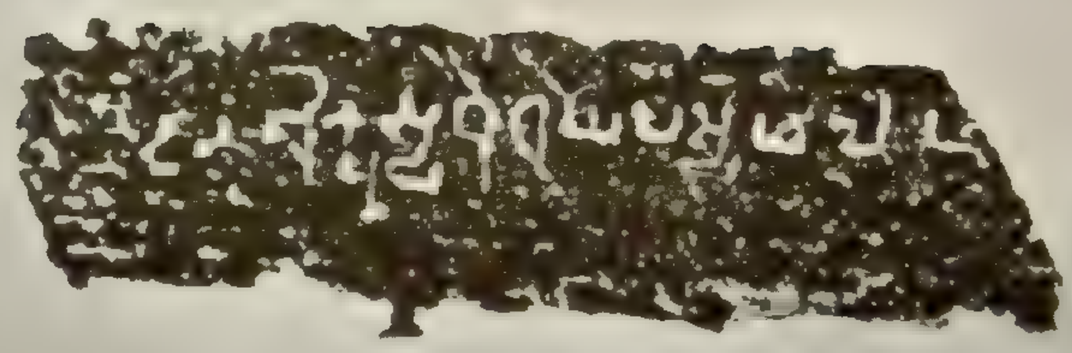


Mathura Inscriptions.

VI



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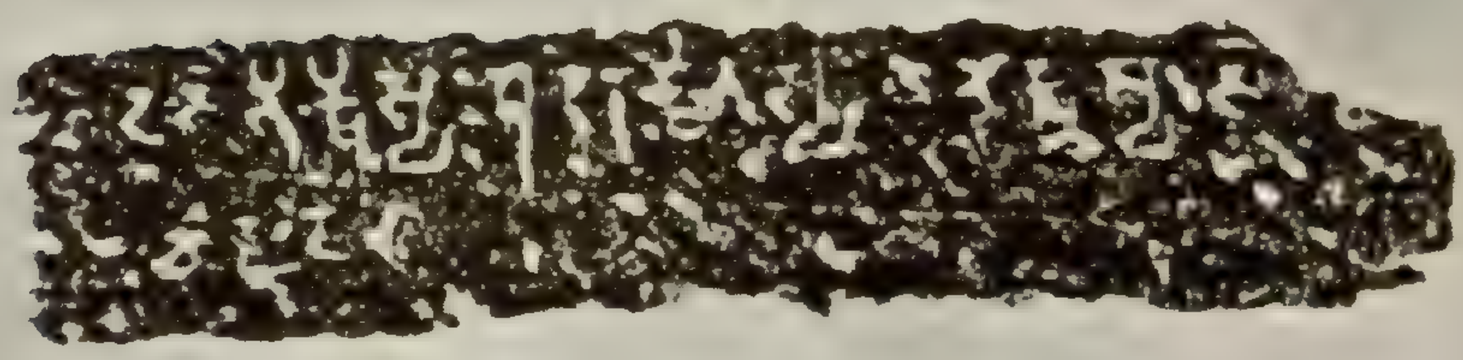

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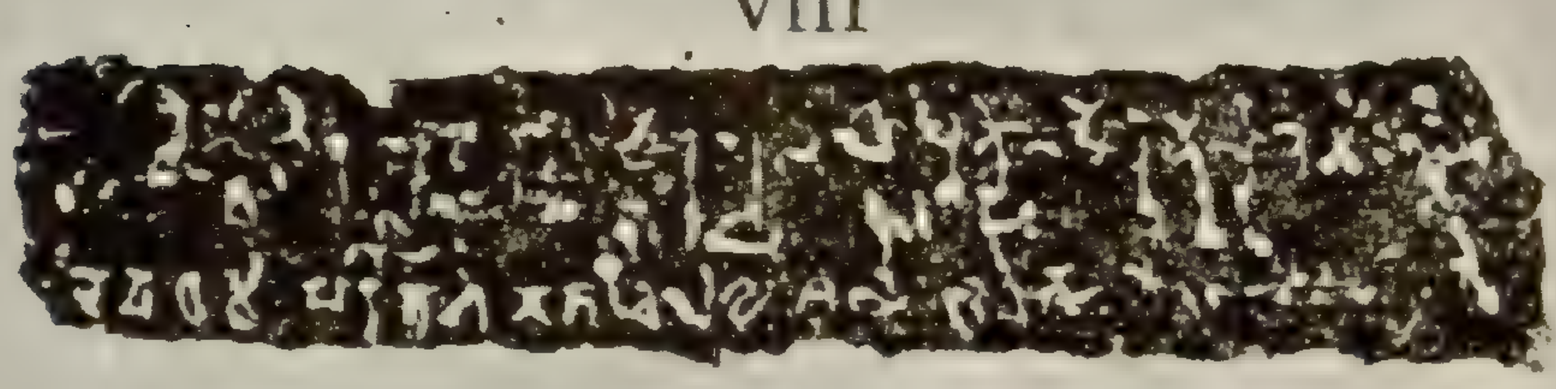

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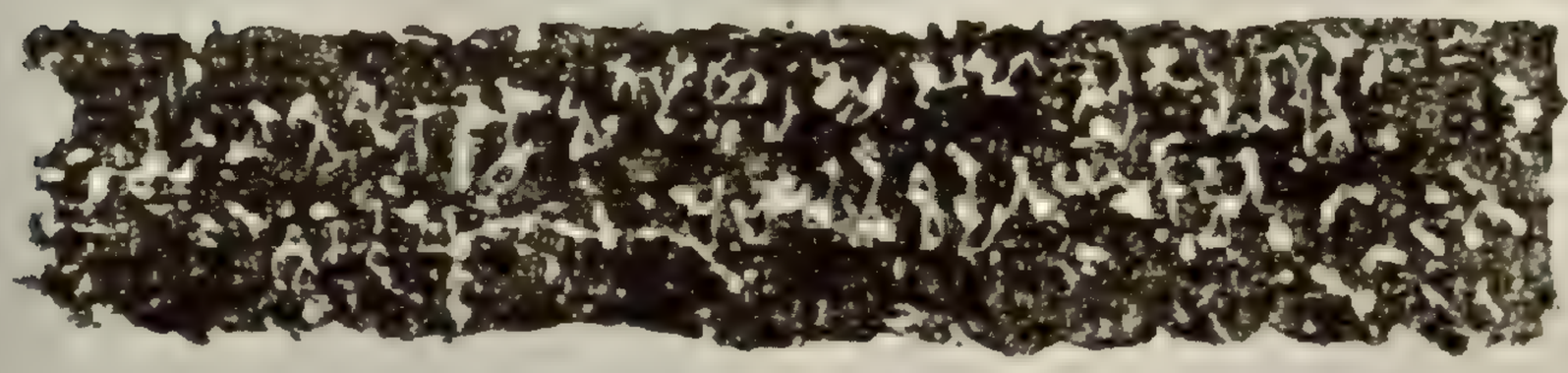

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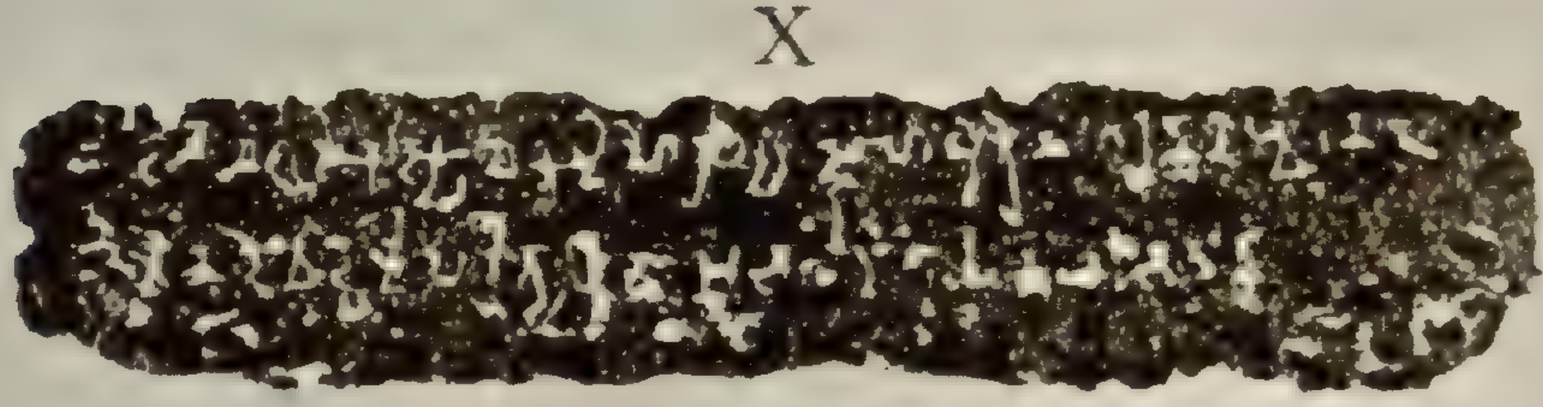

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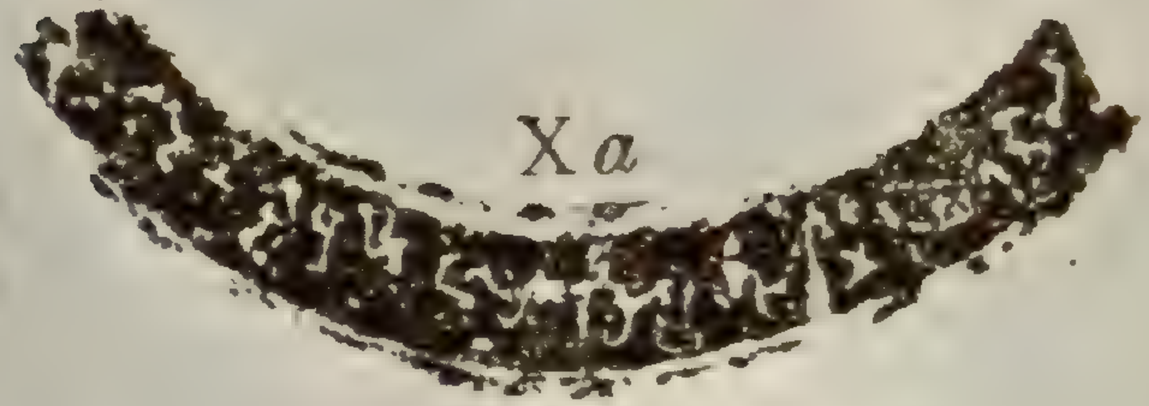

XI

Mathura Inscriptions.

JOURNAL & PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL.

Vol. V, No. 8.

AUGUST, 1909.

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1910.

Issued 22nd February, 1910.

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24. Decomposition of Ammonium Platinichloride and Platinibromide under the Influence of Heat.

By Prafulla Chandra Rây and Atul Chandra Ghosh, M.A., *Research Scholar, Presidency College.*

The decomposition of ammonium-platinochloride by heat has been investigated by Maumené, who seems to be of opinion that the nitrogen of this compound comes off in the shape of di-imide [1] (Bull. Soc. Chim. [3], 4, 1890). It seemed desirable to study the decomposition products of ammonium-platinichloride and platinibromide under similar conditions.

Ammonium Platinichloride.

Berzelius evidently noticed the decomposition of this compound (Gmelin's Handbook of Chemistry, translated by Watts, 1852, VI, 308); but as the record of this work is very meagre and as we have observed some new interesting facts, we consider them worthy of communication. Moreover, the decomposition of the corresponding bromide compound could not be studied with advantage unless a comparison was instituted between it and the former.

The salt was prepared in the usual way, washed with alcohol and dried at 100—104°. Analyses of several distinct preparations gave, on ignition, the mean percentage of platinum as 43·41, that required by theory being 43·85.

Method of Experiment.

It will be shown below that the decomposition of the substance takes place according to the equation as given by Berzelius :

$$3\,(NH_4)_2\,PtCl_6 = 3Pt + 16HCl + 2NH_4Cl + 2N_2$$

which requires the theoretical percentages of chlorine and nitrogen distributed as follows :—

---

[1] The original memoir is not available here; our information is derived from the Abs. Chem. Soc. Journ. 1890, 262. It is evidently due to an error that the formation of di-imide has been attributed to the decomposition of ammonium platinichloride according to the equation : $PtCl_4.2NH_4Cl = Pt + 4HCl + 2NH\ HCl$. (Vide Moissan's *Chimie Minérale*. 1, 556). This error has also been repeated in Caven and Lander's *Systematic Inorganic Chemistry*, p. 192.

Cl as HCl	Cl as NH_4Cl	Total Cl
42·7	5·33	48·03
N as NH_4Cl	N as gas	Total N
2·1	4·2	6·3

The salt was sometimes heated on a porcelain boat in an open tube, 93 cm. in length, in a current of dry air (Fig.1);

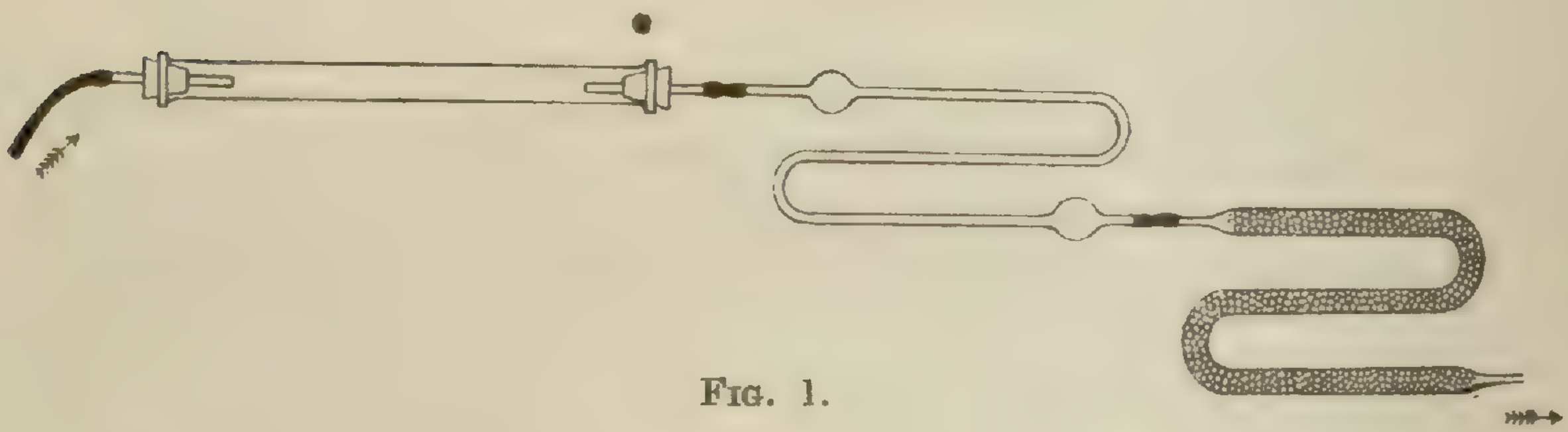

FIG. 1.

the major portion of the sublimate condensed in the upper part of the tube a little away from the source of heat. It is worthy of note that distinct traces of platinic chloride invariably volatilised along with the sublimate, imparting to the aqueous solution of the latter, as also to the precipitate of silver chloride derived from it, a faint yellow tint. It is only when the sublimate was cautiously resublimed that the colour disappeared. This phenomenon was also seen when the salt was heated in a vacuum as in the succeeding experiments. As, however, small quantities of the sublimate were carried beyond the length of the tube the arrangement as shown in Fig. 1 was adopted. To the tube was attached a glass spiral with bulbs blown in it, these being packed close with asbestos. This spiral terminated in another packed with glass beads moistened with a solution of caustic potash in order to catch the hydrochloric acid. The chlorine in the "washings" of the tube and the spiral with the asbestos was taken to represent the chlorine of ammonium chloride, while that in the washings of the second spiral, the chlorine of hydrochloric acid. A curious and what appeared to be an anomalous behaviour was noticed. Although the percentage of total chlorine agreed fairly well with the theoretical amount, the distribution of it in the shape of ammonium chloride and hydrogen chloride respectively varied within wide limits. Thus in one experiment the percentage of chlorine as hydrochloric acid came out as 38·4, while that in the shape of ammonium chloride as 9·68; the theoretical numbers being 42·7 and 5 33. On substituting the open tube for a closed one as shown in the first portion of Fig. 2, the other parts remaining the same as in Fig 1, and exhausting the apparatus by means of the "Sprengel" and collecting the gas which remained un-

absorbed, the percentage of nitrogen as required by the equation given above was always obtained, the mean of five

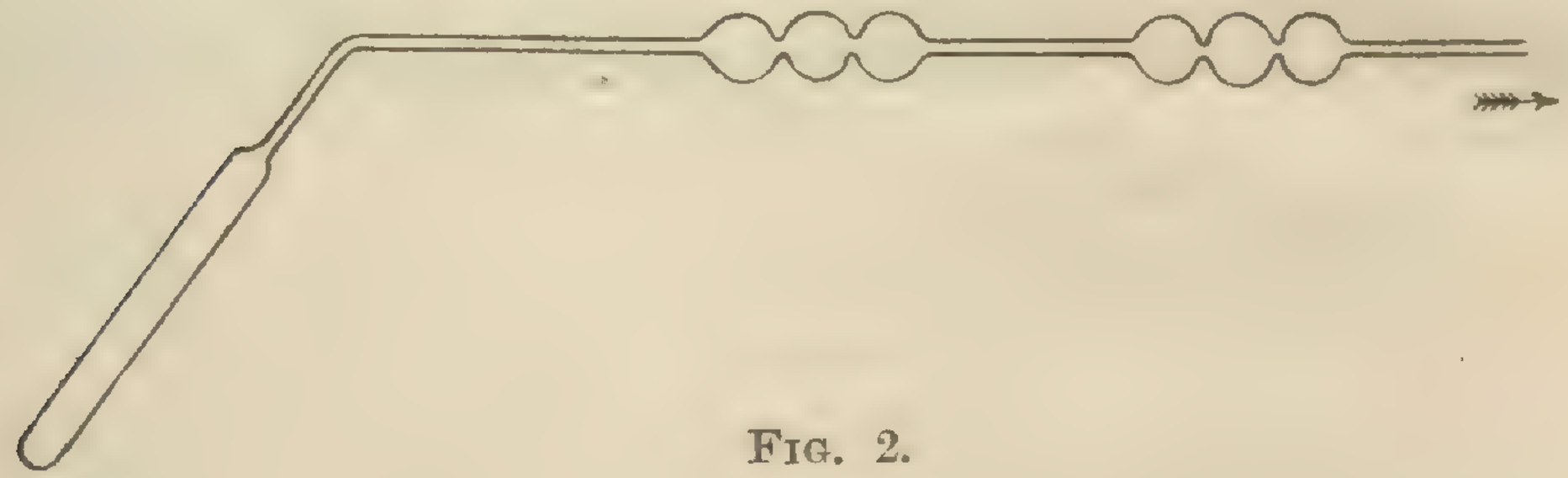

FIG. 2.

concordant estimations being 4·16, that required by theory being 4·2. That the gas was pure nitrogen was proved by "sparking" it for some time, when the volume remained unchanged. A given volume of oxygen was also in some instances introduced into the gas and a spark passed, but no diminution in volume was noticed, which would be the case if it contained free hydrogen.

The fluctuations in the distribution of chlorine as described above, however, did not cease. It was, therefore, suspected that minute traces of moisture given off either by the salt or tenaciously held by the glass or the asbestos condensed the hydrochloric acid in varying proportions. The second series of bulbs was, therefore, plugged with phosphoric pentoxide and the apparatus while in a vacuum was heated several hours in an air-bath at a temperature of 80°. The dry hydrochloric acid which was given off along with nitrogen was collected and measured by the diminution in volume after absorption by caustic potash solution. The chlorine in the potassium chloride formed by the reaction was also estimated. In one experiment the percentage according to the former method was 37·79, while that from the potassium chloride amounted to 38·25. The divergence from the theoretical amount, *viz.* 42·7, was still considerable. The chlorine in the washings of the tube and the bulbs, *i.e.* the chlorine of what was taken to represent ammonium chloride, came out, on the other hand, far in excess of that demanded by theory. Although we had performed more than two dozen experiments we could not account for this anomaly. Our attention was, however, drawn to Baker's identical experiences (*Trans. Chem. Soc.* 1894, 65, 615). Hydrochloric acid even when perfectly dry attacks the alkali constituents of the soft glass. The asbestos used in our experiments was also similarly affected. On substituting hard glass tubes and asbestos previously digested in *aqua regia*, the percentage of chlorine as hydrochloric acid rose to

40·5; while that in the shape of ammonium chloride went down to 5·7. Perfect immunity of the glass from the attack of the acid could not be secured with our samples.[1] The deficiency of chlorine to the extent of about 1·8 per cent. is accounted for by the fact that traces of ammonium chloride in the shape of fine dust were invariably carried off into the "Sprengel," in spite of the packing of the bulbs with the materials named above.

Decomposition of Ammonium Platinibromide.

The method of carrying on the experiment was exactly the same as described above. As free bromine was liberated it was absorbed sometimes by the potassium iodide solution with which the glass beads were moistened, and the amount of which was estimated by its equivalent of the iodine liberated, and sometimes by caustic potash solution which also absorbed the hydrogen bromide given off according to equation (2) as shown below. In the latter case it was necessary to reduce the alkaline solution by means of aluminium foil as a portion of the bromine was converted into bromate. The reaction evidently proceeded simultaneously according to the two equations :

$$(NH_4)_2\,PtBr_6 = Pt + 2NH_4Br + 4Br \quad .. \quad .. \quad 1$$

$$3\,(NH_4)_2\,PtBr_6 = 3Pt + 16HBr + 2NH_4Br + 2N_2 \quad .. \quad 2$$

According to the first equation the bromine should be distributed as NH_4Br 22·50 p.c., in the free state, 45·02 p.c. total 67·52; while equation No. (2) requires the bromine as NH_4Br 7·50 p.c. and as HBr 60·02 respectively, and free nitrogen 2·62 p.c. Two experiments carried on with the apparatus as shown in Fig. 2 without, however, the salt being dried by the interposition of phosphoric pentoxide, yielded the following result :—

Br (free)%	N (free)%	
31·93	0·79	i
30·92	0·80	ii

When, however, the salt was more thoroughly dried and the moisture excluded by filling the bulbs with phosphoric pentoxide, the percentages of nitrogen rose to 1·28 and 1·58. (Exp. III and IV.)

Speaking roughly, 70 per cent. of the salt decomposed according to equation (1) in experiments I and II, while by taking care so that moisture was excluded as far as possible, the direction of the reaction was reversed, the major portion

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[1] It may be added here that glass tubing stocked in the damp climate of Lower Bengal often deteriorates in quality.

of the salt (in fact as much as 60 per cent.) in experiment IV decomposing according to equation (2).

It may be stated here that in the experiment with platinichloride, when the salt was thoroughly dried with the aid of phosphoric pentoxide, minute traces of chlorine were given off, which soiled the mercury in the "Sprengel" tube. But it is of interest to note that in the case of the corresponding bromine compound, the more it is dried the less the amount of free-bromine evolved.

25. Some Notes on Mineralogy: Isomorphism between Anthydrite and Barites.

By Professor E. Sommerfeldt, Ph.D., F.C.S., F.G.S.

There had been doubts up to the present, if the mineral barites and anhydrite are isomorphous, as the crystallographic symmetry of both is the same, but as the difference of corresponding angles is very great. The artificially made crystals may help us to decide if they are not. I at first believed that there were some crystallographic differences between the artificial anhydrous lime sulphate and the mineral anhydrite, but I have to thank Dr. Johnson, at Goettingen, who showed that both were identically the same.

There is no doubt that mixed crystals of the two sulphates are to be found, and if all such two substances are called isomorphous then anhydrite and barites are isomorphous. But one must not rely on this condition alone.

The supersaturation of a solution can be removed by a trace of the dissolved substance and by a trace of any isomorphous substance: that gives a method investigated by Ostwald for recognising isomorphism. I made experiments by adding a trace of anhydride to a supersaturated solution of barites in sulphuric acid and watched the time necessary for crystallisation, but no acceleration could be found if such nuclei were added or not.

The same result was obtained by adding nuclei of barites to a solution able to give anhydride crystals. Therefore the two substances cannot be called isomorphous as they do not agree to Ostwald's method of recognising isomorphism; but perhaps another modification of lime sulphate, unknown yet, may be isomorphous with barites.

26. The Discovery of Seven New-dated Records of the Scythian Period.

By R. D. Bandyopādhyāya.

The existence of unpublished dated records of the Scythian period in the Provincial Museum at Lucknow was well known to scholars both in Europe and in India. In 1903 the publication of Mr. V. A. Smith's essay on the Kusana period of Indian History re-opened the subject, and since then numerous valuable contributions on it have appeared in the various publications devoted to Orientology. In 1905 Mr. V. A. Smith obtained a complete set of inked impressions of the inscriptions on the Lucknow Museum through the Curator.[1] But unfortunately none of them have been published as yet. I came to know of the existence of two or three absolutely new records in the Lucknow Museum in October 1906 while I was hunting about for materials of my paper on the Scythian period of Indian History. I was informed by the Curator of the Museum that *all* inscriptions have been published. Unfortunately I had no spare time on that occasion and so was unable to examine them thoroughly. In 1908 the executive committee of the Lucknow Provincial Museum resolved to entrust the cataloguing of the Archæological Section of the Museum to me on the recommendation of Dr. J. Ph. Vogel, Ph.D. A careful search revealed no less than seven dated records and seven fragmentary records of the Scythian period only. I am taking the earliest opportunity of placing them before the public as the catalogue is not expected to go to the press till the end of 1910. Details of *provenance* have been recorded in those cases only in which they seem to be indisputable.

I. Inscribed Coping Stone from Rāmnagar.

This inscription is found on a split coping which came from Ramnagar, the ancient Ahichattra, in the Bareilly district. This seems to be the identical coping stone mentioned by Dr. Führer in his monthly report for April 1892.[2] The language is corrupt Sanskrit and the characters are slightly older than the Sarnath inscription of Kaniṣka :—

---

[1] *J.R.A.S.*, 1905, p. 151.
[2] N.W.P. and Oudh Provincial Museum Minutes, vol. v, p. 5.

Text.

1. [Si]ddhaṁ Nama bhagavā.....
2. ....rā bugharā.....
3. .. [va] rshe pratha[me].....
4. .... [di] vase 10, 1.....
5. .... [Dhru ?] va mitrasya pra [pauttreṇa]
6. ....sya pauttreṇa Śau.....
7. ..bhargavī puttreṇa.....
8. ..su Pāṁcālīye.....
9. ..sthitena hāti.....
10. ..kāyāṁ patitaḥ.....
11. ..itaḥ sthitena.....

Translation.

1. "....Adoration to the divine.....in the first year of ..... [the.....month] (*and*) the 11th day. By .....the son of a bhargavī (*a mother of the Bhārgava gottra*]—the grandson of .....(*and*) the great-grandson of Dhruvamitra.....in the country of the Pāñchālas..... which stood.....fallen in the ....*kā*.....which stood here."

The name of the great-grandfather of the donor has been tentatively restored based on Cunningham's readings of the legend of a Pāñcāla coin of the same period.[1] If the identification of the grandfather of the donor with the Pāñcāla chieftain of the same name be correct then this inscription will be the earliest inscription from Ahichattra, which was the ancient capital of the Pañcāla country.

II. Inscribed Base of a Bodhisattva Image from Mathurā.

The first part of this inscription was deciphered by Growse.[2] The decipherment of the second part is very important as it shows that the statue was an image of a Bodhisattva and adds one more to the list of Bodhisattvas of this period.[3]

Text.

.....Varṣāmāse 2 divase 6 a[syāṁ purvāyāṁ].....
....ṇena Bod[dh]isat [v]o p[r]atis[th]āpito mā[tā]pitihi sahā.....

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[1] Cunningham, Coins of Ancient India, p. 18.
[2] Ind. Antiquary, vol. vi, p. 219 ; and Growse's Mathurā (*2nd edition*), p. 106.
[3] J.A.S.B., vol. lxvii. p. 28, and *E. I.*, vol. viii, p. 1.

Translation.

"..... the second month of the rainy season, the sixth day, on that (*date specified as*) above..... a Bodhisattva (image) was set up by.....ṇa together with his father (*and*) mother (*and*)....."

III. Inscribed Jaina Image, the year 9.

Nothing is known about the find spot of this image. The material is common red sandstone usually employed in the Mathurā sculptures of this period. It was standing in the Jaina section of the Lucknow Museum without a label or number when it was discovered. The inscription consists of three irregular lines. The characters belong to the Kuṣana period, and the language is corrupt Sanskrit.

Text.

1. Siddhaṁ Saṁ 9 he 3 di 10 Grahamitrasya dhitu Śīva-śirisya vadhu Ekraḍalasya
2. Koṭṭiyā to gaṇato / Arya Tarika [s] ya / Kuṭuṁbīniye
3. Thaṇiyāto Kulāto Vairāto Śākhato / [ni] vartanā / Gaha-palāye dati.

Translation.

"Success! In the year 9 the third month of winter, the tenth day; the gift of Gahapalā, the wife of Ekraḍala, the daughter-in-law of Śīvaśiri and the daughter of Grahamitra, at the request of the venerable Tarika out of the Koṭṭiya gaṇa, the Ṭhaniya *kula* and the Vairā *Śākhā*."

The space between the feet of the image bears a short inscription consisting of two lines :—

1. Arya Agha
2. masya śiśini.

"The female pupil of the venerable Aghama." It refers most probably to the donor of the image.

IV. Inscribed Jaina Image, the year 12.

As before nothing is known about the *provenance* of this image. Dr. Führer in his monthly report for the month of April, 1892, refers to "one pedestal of a statue of a Tīrthaṁkara inscribed Śakasaṁvat 10. Excavated from the ancient site of a Digambara temple at Ramnagar in Rohilkhand."[1] It is possible that our image is referred to by these words of Dr. Führer.

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[1] N.W.P. and Oudh Provincial Museum Minutes, vol. v, p. 6, App. A.

Text.

1. Saṁ 10, 2, va 4, di 10, 1 etasya purvvāyāṁ Koṭṭiyāto [ga] ṇato Ba[m]bhādāsiyāto Kulāto Uchena
2. garito Śākhāto gaṇisya Aryya Puśilasya śiśīni Datila.... Harinandisya bhaginiye ni[var]
3. tanā Savikānāṁ vaddha-ninaṁ Jinadāsi Rudradeva Dāttāgalā Rudredeva sāmina Ru.....na gahamita
4. Kumāraśiri Vamadāsi Hasti [se] nā Graha śiri Rud[r] adatā Jayadāsi Mitraśiri.....

Translation.

"In the year 12, the fourth month of the rainy season, the eleventh day, on that date specified as above (*an image* (?) *was set up*) by the lay hearers Jinadāsi, Rudrādevasāmi (*Rudradevasvamin*) of Dattagalla, Ru.....Gahamitra (*Grahamītra*).....Kumārśiri (*Kumāra-Śrī*) Vamadāsi (*Brahmadāsi* or *Vāmädāsi*), Hastisenā, Grahaśiri (*Grahaśrī*), Rudradatā (*Rudradattā*), Jayadāsi Mitraśiri (*Mitra-Śrī*)..... at the request of.....the sister of Harinandi, the female pupil of the venerable Puśila out of the Koṭṭiya *gaṇa*, Baṁbhadāsiya (*Brahmadasīya*) *Kula* and the Uchenagari (*Ucchānāgarī*) *Śākha*."

V. Inscription on the Base of an Image of Saṁbhavanātha, the Forty-eighth year of Huvikṣa.

Nobody knows anything about the *provenance* of this inscription. It was found in one of the windows of the Jaina section of the Lucknow Museum. The language is corrupt Sanskrit and the characters are those of the Kuṣana period. The inscription abounds with instances of the Mason's carelessness.

Text.

1. Mahārājasya Huvaksasya Sa[ṁ]vacare 40, 8, va 2, d [i] 10, 1, etasya puvayaṁ Koṭṭiye gaṇe Bama [dā]
2. [s]iye k[u]le Pacangariya Śākaya to Dhujhavalasya śiśiniye Dhujhaśiriye nivatana
3. Budhukasya Vadhuye Śavatrana potrīya yaśāya dana Sa[m]bhavasya proṭimā pra
4. ta (*ti*) sta pe [*pi*] ta.

Translation.

"In the year 48, the second month of the rainy season, the seventeenth day, of the Mahārāja Huvaksa, on that (date specified as) above, an image of Śaṁbhava was set up by Yaśā, the grand-daughter of Śāvatrana (?) and the daughter-in-law

of Budhuka, at the request of Dhujaśiri (*Dhūrjaśrī* ?) the female pupil of Dhujhavala (*Dhūrjavala* ?) out of the Kottiyagaṇa Bamadāsīya (*Brahmadāsīya*) *Kula* and the Pacanagarī (*Vajranāgarī*) *śākhā.*

This is the earliest known instance of the mention of Sambhavanātha, the 3rd Tīrthaṁkara.

VI. Inscribed Digambara Image, the year 71.

The discovery of this inscription was very fortunately recorded by Dr. Führer in one of his six-monthly reports.[1] It came from the Kaṅkāli mound at Mathurā. It is incised on the back of a Digambara Jaina colossus. The back of the image which is carved in the round bears a pilaster in relief and the inscription is incised on the square base of the pilaster. The inscription contains many unusual words and characters :—

Text.

1. Saṁ 10, 1, va 1, di 10, 5
2. e (?) taye (1) puvāyā[ṁ] ha
3. tiya (2) (3) Muṅa (3) śimitā (?) y[e]
4. Manirava (4) śuṣoti (5) dhita.
5. Hemadevas [ya].....

Notes.

1. The form of *E′* in *E′taye* is quite unusual. It looks more like ⌈

2. The reading of the second syllable in the third line is provisional. It is unlike any Kharoṣṭhi or Brāhmī single or compound letter.

3. The word Muṅaśimitā seems to be a proper name. The letter *ṅa* has not been met with in Kuṣana inscriptions but is well known in the inscriptions of the Satraps of *Saurastra.*

4. The word *Susoti* in the 4th line seems to be a form of *skt. Svasrīya* and the whole line may provisionally be taken to mean "the sister's daughter's daughter of Manirava." The dropping of the positive case ending may be the result of the Mason's carelessness.

5. In *suṣoti* the marks for *ā* and *u* combine to form *o.*

Translation.

"In the year 71, the first month of the rainy season, the fifteenth day ; on that (*date specified as*) above .....of Muṅa-

[1] Dr. Führer, *Annual Progress Report of the Archæological Survey* N.W.P. and Oudh Circle (Epigraphical Section), 1891-92, and J.R.A.S., 1903, p. 12.

śimita.....the sister's daughter's daughter of Manirava .....of Hemadeva.....''

VII. Inscribed Caturmukha from Ramnagar, the year 74.

The discovery of this inscription was announced by Dr. Führer in his Annual Report for the 1891-92. It was found in one of the mounds near Ramnagar in the Bareilly district which is supposed to be the site of the ancient Ahichattra of Adhichattra, the capital of the Pañcāla country. The language is a mixture of Sanskrit and Prakrit and characters are those of the Kuṣana period.

Text.

A. 1. [Saṁ] 70, 4, gri 1 di 5 Aya Varaṇāto gaṇato
A. 2. [Ku] lato Vajanakarito S'ākhato Aya S'irikāto.....
B. 1. .....nadhanasya vācakasya śiśiniye Aryya.....
B. 2. .....sasa
C. 1. ....Gahavalāye paṇatidhariye S'iśiniye Aryadāsiye..
C. 2.....
D. 1. ....devasya Kuṭu[ṁ]biniye Dharavalāye dati.....
D. 2. .....saśuye.....

Translation.

''In the year 74, the first month of summer, the fifth day .....the gift of Dharavalā the wife of.....deva (*at the request of*) Aryadāsi the female pupil of Gahavalā (*Grahavalā*) who obeys the command of.....the female pupil of the vacaka....nadhana out of the Venerable Varaṇa (*Vāraṇa*) *gaṇa* .....Kula, the Vajanakarī (*Vājranāgarī*) *śākhā* (*and*) the Aryaśirīka (*Ārya-śrīka*) (*saṁbhoga*).

VIII. Inscribed Image of Ṛṣabhanātha, the year 84.

This image was discovered by Pundit Radha Krishna, the honorary Curator of the Mathurā Municipal Museum on the banks of the Balabhadra Kunda on the outskirts of the city on the 15th of November 1908. It is now preserved in the Mathurā Municipal Museum. I have received only one impression of the inscription from Dr. J. Ph. Vogel of the Archæological Survey. I have not been able to decipher the third line completely as the impression is not sufficiently clear. The inscription consists of three lines of which the last one is incised at the bottom of the base or pedestal. The language is corrupt Sanskrit and the characters have been very carelessly incised. It records the erection of an image of Ṛṣabhanātha, the first Tīrthaṁkara in the year 84 in the reign of the *Mahārāja-Rājatirāja-Devaputra-ṣâhi-Vāsudeva*.

Text.

1. S[i]dha [ṁ] Mahārājasya rājatirājasya De [va] putrasya ṣ [ā] hi Vāsudevasya rajyasa [ṁ] vatsara 80, 4 gṛṣma māse dvi 2
2. di 5 etasya puvayaṁ Bhavadattasya dhita Bha (?) ṭakasya vadhu Ekṣi (?) disa kuṭubiniye gadhika-bhavā-
3. bhagavato arhata Ṛ (?) ṣabhasa pratimā pratiṣṭhāpitā

.....

Translation.

Success ! In the year 84, the first month of summer, the fifth day, on that (*date specified as*) above an image of Ṛshabha was set up by.....the daughter of Bhavadatta, the daughter-in-law of Bhaṭaka, the wife of Ekṣidi,.....the perfumer.....''

This is the fourth known instance of the mention of Ṛshabhanātha, the first Tīrthaṁkara in the inscriptions of this period.

27. Some Persian Folk-lore Stories concerning the Ruins of Persepolis.

By Captain C. M. Gibbon, *Royal Irish Fusiliers.*

When travelling in Persia a short time ago, I was much struck with the curious stories current among all classes of Persians concerning the old ruins of Persepolis. Can we, however, wonder that there should be any lack of tales and quaint beliefs originating in the ideas inspired by one of the most interesting piles of remains existing in the world, and on which no man can look unmoved by feelings of wonder and astonishment? For my part, I am inclined to look on the few notes I have made as merely an indication of the existence of a fruitful source of folk stories and quaint beliefs.

It may be well to say that the ruins of Persepolis, the ancient capital of the Persian monarchs, and which was supposed to have been fired by Alexander the Great, are situated in Persia, in the Province of Fars, about forty miles north of the town of Shiraz. The great platform, on which the ancient ruins of the palace of the kings still remain, lies in the plain of Mervdasht, and is always known to the Persians as the Takht-i-Jamshid (*i e.*, the throne of Jamshid). The rock face, about three or four miles distant. in which are hewn the tombs of the kings, and on the face of which are cut the world-famous bas-reliefs, is known as the Naqsh-i-Rustam (*i.e.*, the pictures of Rustam).

Such an exhaustive study, as was dictated by an interest in the subject, lay beyond my power, owing to the limited nature of the time spent in Persia, and the necessity of returning to India at an early date. Curious to say, I have not been able to find any reference to the stories of which I write in any modern books of travel in Persia, although one or two such allusions exist in the records of the earlier travellers. But I have not had sufficient leisure, or access to any library, to feel sure that references to the subject have not been overlooked. Some of the stories are most wide-spread, and one hears them so circumstantially told by different men at different times, that one is impressed by the absolute belief of the Persians themselves in what they tell One is frequently led to wonder whether there cannot have been some actual occurrence which gave rise to its origin. Here is obviously, in some cases, folk-lore in the making, and patient study and enquiry—helped by the requisite knowledge of colloquial Persian—might shed much light on many obscure points. May we not seek to find a parallel of the Persian desire to attribute a superior knowledge to his bygone ancestors over that of the *Ferangi*, in the matter

of the invention of firearms, to that of the modern Hindu, who seeks to show that the Vedic writings are evidence of the knowledge of the sciences by the old Indian sages[1]?

I should mention that the greater number of the stories were related to me by Persian caravan men on many a long march, or in the evenings by villagers or travellers in the village or caravanserai. Usually no questioning was required. The mere mention of the fact that we were to pass by the ruins was sufficient to set my companion of the moment talking. Perhaps the stories may have been all the more spontaneous, as I always wore an Afghan *lungi*, and being accompanied by Pathans, was often, for the time being at least, taken for an Afghan myself; such mistaken identity being more than sufficient to account for any defects noticed in my pronunciation by the ignorant villagers. At the same time my acquaintance with Persian was such as to permit of my carrying on a fluent conversation with any Persian met with. I used to write the stories down as well as I could remember them on the first opportunity, usually the same night before going to bed. Several of the stories, however, were taken down by me in Persian as they were related to me afterwards by my friend Mirza Azizullah Khan of Shiraz, to whom I am much indebted for the trouble he took on my behalf, and afterwards translated by me into English.

I have decided to give the different variations of the stories separately; and I have also ventured to translate the extracts made from the old French authors. If the renderings of the authorities be not so accurate as to meet the requirements of the critical French scholar, I would plead the difficulty experienced sometimes in understanding the exact meaning of the quaint old French in which the books are written. Such as the stories are, they are offered in the hope that they may attract the attention of some traveller better situated than myself to investigate them, by reason of his superior knowledge and opportunities, which may perchance lead him to discover much that lay beyond my power.

I.

The Finding of a Martini Henry Rifle, by a European Traveller, in one of the Sarcophagi of the Rock-Hewn Tombs at the Naqsh-i-Rustam.

1.

As far away as the town of Shehr-i-Babak, say 175 miles distant by road, I heard the story in detail of the finding

[1] *Vide* "Cults, Customs, and Superstitions of India," Oman. page 144.—C. M. G.

of the Martini Henry rifle in the tombs of Persepolis, although I had heard allusions to the fact at Kirman, 125 miles further away. This is all the more interesting, and emphasises the wide and general belief in the story, as the inhabitants of the Kirman and Shehr-i-Babak districts rarely or never visit Shiraz; Yazd is the town from which all their supplies are drawn. The story was told me not once or twice, but almost every day on my march towards Persepolis by the various villagers and caravan men met with on the road. One may indeed say without hesitation that this is the most universally believed of all the stories concerning Persepolis current amongst the Persians of the present day. The general idea of the story seemed always to be that a European had visited the tombs soon after the middle of the last century, and that he had ascended to them with the aid of ladders and tackle, which he had brought from Shiraz for the purpose. Having entered the tombs, he broke open the great stone lids of the sarcophagi,[1] and in one he found a Martini Henry rifle This, together with other treasures, he carried off to England, notwithstanding the efforts of his Persian attendants, whom he bound and left lying in one of the tombs to be rescued by some passer-by.

Connected with this story is a general belief that Europeans obtained patterns for their revolvers, bandoliers, helmets, shoes, etc., from Persepolis. I was frequently told that pictures of these articles were to be seen cut in the stones of the ruins. When I visited the platform, therefore, the opportunity was taken of asking several men, individually and separately, to point out the supposed representations. As a result I was always conducted to the bas-reliefs of the Nauroz processions cut in the staircases leading up to the smaller terraces built on the great platform at Persepolis. There the quivers on the men's backs were pointed out as Martini Henry rifles, and the straps suspending the quivers as bandoliers. The resemblance can be better realised when it is said that the Persian of the present day always carries his rifle by a sling, but not in the manner customary amongst Europeans: he puts the sling over his right shoulder and carries the rifle with the muzzle to the right front, the barrel being held in the right hand: the butt of the rifle is thus to be seen projecting above the man's left shoulder like the top of the quiver.

These stories were frequently related with a certain touch of bitterness, and as an example of the perfidy of the European in the past, which might well again be expected of him in his dealings with Persia and the Persians in the future.

[1] The universal belief that the sarcophagi were violated in very recent times is curious; it would be interesting to be able to a give satisfactory explanation of this fact.—C. M. G.

According to their ideas, the European had stolen a most valuable asset in the shape of a pattern Martini Henry rifle, which he had carried off out of the country, only to reproduce others to sell at a huge price to the poor Persians whom he had defrauded of their birthright.

2.

The following story is repeated on the authority of one of the oldest headmen of the Mervdasht villages. According to him, about fifty years ago an English traveller came to Persepolis, collected some stones at the Takht-i-Jamshid, and placed them in boxes. He then went on to the Naqsh-i-Rustam, where he tried to scale the face of the rock, in order to enter the tombs, but failed in the attempt. After ten days of preparation, however, he contrived to improvise a tackle and scaffolding, wherewith to have himself hoisted up together with the needful tools. When he descended, after having been at work inside the tombs for some time, those present noticed that he had with him something that resembled a Martini Henry rifle, together with a crystal vessel containing about a stone weight of some ashy-coloured dust, and also a closed metal casket. These he carefully rolled in cloth and packed in a box. That evening some Persians, who had seen what had been done, sent word to Muhammad Rafi' Khan, a well-known *Kalantar* (headman) of Mervdasht, now dead. The latter came the following morning to arrest the traveller and to seize the articles found in the tombs, but the stranger had disappeared during the night. Horsemen were sent in pursuit as far as Imamzadeh Ismail, but did not succeed in effecting his arrest. The *Kalantar*, who subsequently ascended to the tomb by means of the tackle which had been left behind, found a great stone chest, which it was believed the Englishman had broken open, and thence extracted the articles mentioned.

II.

Europeans Finding Hidden Treasure at Persepolis by Means of Magic Arts.

It is said that about twenty-five years ago two Englishmen came to Shiraz in company with a third person, who from his appearance was believed to have been a Persian. Thence they went on to Persepolis, where they remained three days. On the third day after their arrival, Abbas Khan, one of the leading men of the neighbourhood, was out shooting alone and happened to pass by the great platform. There he saw the three strangers. Being tired out, and also curious to see what the visitors were doing, he sat down unobserved in a corner. Whilst he was watching they produced a piece of paper, which

they carefully studied, and then proceeded to measure off a certain distance to the right. Having found a certain spot on the ground, they mixed a colourless liquid out of a bottle with some water, and poured it out on the place they had ascertained by measurement. They then repeated the performance to the left in a similar manner. After this they left off their work and spent an hour or so in examining the ruins. Meanwhile Abbas Khan went forward and joined them. After a while the men set to work to dig at the two points where the liquid had been poured out, Abbas Khan assisting. After digging a while they discovered two metal boxes of red colour, presumably made of gold. On the lid of each box were inscribed three lines of writing in a strange character. Abbas Khan told the strangers that he could not allow them to carry away the boxes without due authority, whereupon they said that they had the permission of the Persian Government to do as they liked. Abbas Khan replied that they would have to obtain the sanction of the Governor of Fars at Shiraz. On this they tried to bribe him not to interfere in the matter, offering him a sum of money down in cash together with a Martini Henry rifle, but he was firm and would not agree to their proposals. By this time it was growing late and no one was about in the neighbourhood, so the three travellers overpowered Abbas Khan, bound him hand and foot, and conveyed him to one of the rock-hewn tombs above the ruins. There they put him in one of the stone sarcophagi, placed beside him some bread and water sufficient to last for two or three days, and left him, only giving him the freedom of one of his arms below the elbow so that he might reach the food. As soon as night fell they departed from the neighbourhood, taking off the treasures they had found. Three days later Abbas Khan made himself heard by a man who happened to be out shooting, and who released him. Abbas Khan immediately proceeded to Shiraz, where he related his story to the Governor, Haji Mutamid-ud-Dauleh. The latter at once sent orders to Bushire and other towns that the travellers should be arrested without fail, but the orders arrived too late and they escaped safely out of the country with their booty.

III.

The Spoliation of the Tombs in the Hillside above the Great Platform at Persepolis by Greek Travellers.

There is a story amongst the inhabitants of the neighbourhood of Mervdasht that, among the number of the many Greeks and Europeans who have visited the ruins in the pursuit of their secrets, were two Greeks, who came and

remained for two days. During that time they examined every hole and corner of the place with the greatest care. Finally they entered one of the tombs above the platform, and broke open the huge stone sarcophagi contained in it. In one they discovered two figures: an embalmed mummy; and a metal statue ornamented with different kinds of precious stones. These they extracted from the great stone chest, and carefully packed in boxes. They then obtained ten armed men from the headman of Mervdasht to act as their escort. One of the men of the guard discovered what was contained in the boxes, and forthwith imparted the information to his Persian master. The Greek travellers having packed everything, were about to set out, when the headman appeared on the scene and forbade their departure. Finally his objections were removed by the exercise of suitable bribes, and the travellers carried off their booty. A few days later news of what had happened was brought to the Governor of Shiraz. He immediately removed the headman from his post and threw him into prison at Shiraz, where the unfortunate man had to remain until he disgorged all the bribes he had received, which were promptly annexed by the Governor himself.

IV.

The Charkh-i-Almas, or Diamond Wheel.

1.

Whilst in the vicinity of Persepolis I was frequently told by the villagers about the Charkh-i-Almas, or the Diamond Wheel; but, long before the neighbourhood was reached, and even before I had entered Fars, enough had been heard to excite my curiosity on the subject. Be it said that below the great platform at Persepolis are numerous underground passages cut in the rock on which it stands. The easiest and best known entrance is situated between the ruins of the Palace of Xerxes and that of Darius, and is merely a narrow shaft between immense slabs of rock. Lord Curzon, whose well known book on Persia may be consulted for details and a discussion of the various theories regarding the passages, comes to the conclusion that they were probably constructed for the passage of water. While I was present a European descended by the opening just mentioned, in company with one of my native companions, but they returned after having penetrated only about fifty yards—if as much. They said that the passage had been silted up and that they could not proceed further than they did without crawling on their hands and knees, and that they did not feel inclined to attempt, as, in addition to the mud and wet, the air was very bad, which was evident

from the fact that when they returned to the surface they were very much out of breath.

The gist of the story, in which there are many minor variations, is that somewhere in this passage is situated the Charkh-i-Almas, which was started spinning in perpetual revolution by that famous hero of Persian fable, Rustam. It is said that this wheel still continues to whirl with incredible velocity in a blaze of light.[1] The Persians say that no native of Persia has ever seen it, as no one has ever dared to penetrate far enough into the passages. I was told, however, that about a hundred years ago—in the "time of the great-grandfathers" of my informant—a European came to Persepolis and entered the passages, notwithstanding the advice given him by his attendants to the contrary. According to some he had to travel two days and two nights, and according to others seven days and seven nights before he reached the Diamond Wheel. His Persian attendants, however, turned back long before he had got so far. The daring traveller attempted to seize the whirling wheel, but was instantly consumed by fire. Since that time no Persian dares to enter the passage even for the shortest distance. Perhaps this story may have had its origin in a distortion of Chardin's adventure, as related below, or in that of some equally daring and curious traveller whose adventures have not been left on record.

2.

According to one informant, some twenty years ago Persepolis was visited by an Englishman, who descended into the underground passages below the platform in company with one of the local inhabitants. After having gone a short distance the Persian was overcome by the cold air and had to return to the surface. The Englishman, however, taking the light himself, continued alone, but had proceeded only a few paces further when the light went out, and he also was forced to return by reason of the intense cold. As a result of the adventure he remained ill in bed for one or two days, after which he returned to England. During the following year, he again visited Persepolis, in company with two other Englishmen. This time, knowing what to expect, they came fully prepared, bringing with them special clothes to withstand the cold, and protected lights. They entered the passage early in the morning, unaccompanied by any Persian, and emerged from the same hole by which they had entered about midday. After

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[1] Folk-lore stories, although found in widely separated places, have frequently a curious family resemblance under similar circumstances, but I cannot call to mind ever having heard any tale of an underground passage, and there are many of them, in which there was the slightest resemblance to th s one of a blaze of light continually revolving in its hidden depths.—C. M. G.

having had some food they again descended, and this time they did not appear until midnight. It appeared also that they must have found another exit, as they did not emerge from the passage by which they had entered, but were seen to approach the platform from the open plain. As it was a very dark night no one was able to observe if they had anything with them, and no one was able to ascertain what their adventures had been, or what they had seen.

3.

An educated Persian in reply to a question told me that Persians, who have accompanied Europeans into the underground passages, say that when a distance of from sixty to eighty yards has been penetrated, there is such a strong wind found to be blowing that no headway can be made against it, and one is consequently forced to turn back. It is commonly believed that this wind is created by the flanges of the diamond wheel which is always revolving with immense velocity.

Some Persians who are better educated state that there is no such thing as the Charkh-i-Almas, and that the passages are in reality ancient water conduits.

Others say that they have accompanied European travellers into the passages, and that they have only been stopped by the road being flooded with water, and that there is no unusual wind.

Whatever may be the truth of the matter, no Persian is really in a position to report, as the passage is full of terror and unseen dangers, such that no one dares to face them. The three Englishmen who entered the passage are the only persons who are actually known to have penetrated to any distance.

4.

Extracts from "Chardin's Travels in Persia," 1674.

[Translated from the French.]

"Having described the exterior of the temple (Per-
" sepolis), we must speak of what may be termed the *Sub-*
" *terranean Temple*, namely, of the numerous subterranean
" canals or conduits, which have been cut in the rock lying
" under the whole building, and which extend to every point
" and run in every direction, at a distance of about five feet
" under the surface. The entrances to these passages are un-
" known, likewise the end. They are entered by some very
" narrow openings in the rocks, which are either due to the
" result of the lapse of ages, which must have its inevitable
" effect, or the result of some earthquake, or are, perhaps, to

"be attributed to those same men whose hope of buried "treasure led them to break into and explore the tombs. "These channels are so low and so narrow that it is very "difficult to walk in them, or to stand upright, except at "some very few places. I was told that they led to tombs, "to caves, to subterranean chambers, and that I should only "attempt to follow them at the peril of my life; however, I "did not find it so at all. I entered at seven or eight different "points, and I went in as far as a hundred and fifty yards in "some. I had several attendants with me carrying lighted "candles in their hands. I left the more timid fairly close to "the entrance at thirty paces distant one from the other, and "I advanced with the confidence of a man who imagines that "he is going to find wonders; but I frequently found myself "brought to a full stop: sometimes the passage became so "narrow and so low, that I could scarcely advance on my "hands and knees; sometimes I had even to drag myself "along on the stomach; and ten paces further there would "only be room for a man's head. At certain places, the "rocky arch, or roof as one ought rather to call it, had given "way; whilst at others the road was blocked by masses of "rock so heavy that, even had one not been out of breath and "nearly stifled for want of air, one could not have stirred "them.

"I found there many bones of animals. but principally the "horns of goats; these bones were quite white, and much "gnawed: and that was all I discovered. But I observed "with admiration the excellence of the cutting of the rock "and the hardness of the marble. The sides of the channels "are smooth and polished like the glass of a mirror; the floor "or bottom is covered with a sticky kind of clay, quite damp "and soft; and I believe that it is always so, on account of "the natural humidity of the place and the rain water which "percolates through the cracks in the ground. What I won- "dered at more than anything else was the incomprehen- "sibility of the work, and the object with which it could have "been designed. Who could have hewn these passages? said "I to myself on my first visit; so narrow that I a young man "of twenty years of age could not traverse them. slim as I "was then, even on all fours. What could they have been "made for? The massive nature of the unique edifice above "ground, and the stature of the men represented on its stones, "would incline one to imagine that the men who built it must "have been giants; whilst the narrow nature of the passages "would lead one to believe that they must have been "pygmies! I assure you that I can never call it to mind "without thinking of the enchanted castles of the Romans.

"When I spoke on the subject with a Persian gentleman, "equally curious as well-informed, in 1663, during my second

" journey, he told me that I had been unfortunate in not find-
" ing the most spacious passages of the temple; that there
" were some in which one could penetrate three or four
" leagues, and that they should be sought in the eastern
" corner. I did so the following year, and was fortunate
" enough in finding one of this description. I laid in a good
" supply of candles and brandy, and I took with me three men
" who were quite resolved to see the adventure through, under
" the influence of a *Calaat* each; the latter is a suit of clothes
" reaching from the head to the foot of the wearer, and is the
" usual reward given to retainers and servants for any im-
" portant work. I found this passage to be some two feet
" deeper in the ground than the others, and large enough for
" one to walk in upright and with comfort. The cutting of
" the rock appeared to me to be as good as in the other
" passages, and the bottom was covered with a deposit of
" earth in a similar manner. I walked in it for about thirty-
" five minutes, and I traversed a distance of about a quarter
" of a league. We placed lighted candles at every fifty paces,
" and at the end of three hundred paces I left a man to await
" us. I posted another a couple of hundred paces further on,
" because we came to cross roads with three ways in front of
" us, and two to the side, radiating outwards like the points
" of a star, and where we might have lost our way on our
" return. If those who hold that these passages were for the
" purpose of supplying water to the temple, had penetrated in
" as far as I did, they would have changed their minds on see-
" ing this labyrinth, in which water could not have failed to
" have run away and be lost. When I had advanced another
" three hundred paces further, the heart of my attendant
" failed him; he cried out that he was stifling and that he
" could do no more. I entreated him, I made him promises,
" and finally succeeded in inducing him to advance a few paces
" more; but at last he allowed himself to sink down, and
" asked me why I should thus risk the lives of four men to no
" advantage; finally I came to myself and realised that no
" discovery that I could make would be worth the risk to my
" life, which I might thus lose in the most miserable manner
" in the world. Besides I was beginning to feel somewhat
" overcome and dizzy myself. The want of air and difficulty
" of respiration oppressed me. The place has a certain horror
" about it which stupefies one, and although there is obviously
" nothing to fear, one cannot help being afraid. What
" troubled me more than anything else was the risk of losing
" our way on the return journey; for, as I have said, from
" time to time we had passed on either hand passages which
" might well confuse us, especially if anything should
" happen to our candles, which did not burn well in such a
" close space. I therefore retraced by steps, without having

"seen anything, with the exception of the various roads "which cut and intersect each other. Thus I was not so "fortunate as Pietro della Valle,[1] who said that he had there "seen a great chamber, somewhat raised in the form of a "tower, built of marble, closed in on every side, with a single "door above in an inaccessible place, which he had taken to "be a tomb. I saw nothing of this place, nor anything which "resembled it; but I do not on that account reject the "evidence of that celebrated traveller: for I believe that "there are many extraordinary discoveries to be made under "these mountains, and that there must be very much more "than what I saw.

"The people of the country believe it so, and they assure "one that this passage continues for more than six leagues, "that it leads to the subterranean tombs at the burial hill, "which is two leagues distant, to chambers full of treasure, "and even that is not the end. They appear to be quite "convinced of the existence of these treasures, and to be "greatly fascinated by them; but they add at the same time, "that all these subterranean passages are a labyrinth, that "many who have ventured into them have perished, and that "there is no way of attaining to the treasure. The headman "of Mirkaskoun, which is a village situated about half a "league from the temple, told me a story that they have in "the country of a man who found these treasures about two "hundred years ago. This was the Deputy Governor of the "district. The Province was then under a certain king who "had his residence at Shiraz. Now this Deputy Governor "had spent so much money that, in addition to his other "creditors, he was largely indebted to the Royal Treasury. "The Grand Vizier pressing him to pay, with threats to flay "him alive, and to sell his wife and children according to the "custom of the country, he resolved to kill himself; but being "prepared to carry out this desperate resolution, he reflected "within himself: 'Why kill myself, which means being "irrevocably lost? Would it not be preferable to try my luck "in this *House of Idols*?' (The Persians thus term all "temples where there are statues or carvings.) 'Everyone "says that these subterranean passages lead to places full of "treasures. If I am more lucky than the others who have "attempted to penetrate them in the past, I will pay the "king, and I shall be rich for ever: and if I remain in them "like the others, I can but die, and that I am already

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[1] I have looked up this reference, and, after careful consideration of a somewhat confused account, have come to the conclusion that Pietro della Valle undoubtedly refers to the fire temple standing at the foot of the tombs of the Naqsh-i-Rustam, and to which his description is fully applicable.—C. M. G.

"resolved on should I fail to find the wherewithal to get "myself out of trouble.' This resolution taken he provided "himself with plenty of candles and some food, and started "on his road, where he went so straight and with such good "luck that he found a chamber full of pieces of gold, with "which he returned laden on the fourth day; but, since his "load was not sufficient to pay his debts, he wished to return "to the treasure, but apparently lost his way since it was "never known what had happened to him."

5.

Extract from "Les Voyages de Corneille le Brun par la Moscovie, en Perse, et aux Indes Orientales," 1704.

[Translated from the French.]

"..... To the east of this staircase are subterranean "passages, where nobody dares to enter, although it is said "that they contain great treasures, because the Persians are "persuaded that if anyone goes in even for a short distance "his light goes out of itself. That did not prevent me "making the attempt accompanied by a stout-hearted Persian.

"Having descended between two rocks one finds two "roads: we took that which leads towards the east, which we "found to be about six feet high, and in width about two "feet four inches at the entrance, whilst a little further in "advance it was about one foot seven or one foot eight "inches.

"Having advanced some twenty-six paces, we found the "roof so low that we had to go for ten paces on our stomachs, "after which the former height was resumed; but we struck "against the rock again after going a few paces further, and "I found that there was only a narrow conduit leading on, "which it was impossible to traverse, and which had appar-"ently served in former times for the passage of water. "After having returned to the place at which we had de-"scended, I went along the passage which runs to the west, "and there I found a road leading off to the north, but too "low to admit of its being traversed even crawling on one's "stomach: but even had there been sufficient room, the "damp nature of the ground would have forbidden the "attempt. We had, therefore, to retrace our steps, but with-"out our light going out, and without having found the "treasure which it is said is hidden in these underground "passages. Besides, there was good reason to believe that "they had only served for the passage of water, both on "account of the lowness of the roof, and for the reason "that one did not see any cells, or any traces of small "altars, or any other similar remains, which would have led

" one to imagine that they had been used for sacred purposes,
" as one so often finds in Italy and many other places."

6.

Extract from "Observations made on a Tour from Bengal to Persia in the Year 1786-7," *by William Franklin.*

"Underneath the above-mentioned devices are small
" openings, which lead to a subterraneous passage, cut out of
" the mountain; it is six feet in height, and four in breadth;
" the passage leads a considerable way into the rock, but it
" is quite dark after advancing about thirty yards, and emits
" a most noisome smell. The natives call this place the Cherk
" Almas, that is, the Talisman or Diamond of Fate[1]: they
" affirm that at the end of the passage is the Talisman, and
" that whosoever arrives thither, and asks questions of future
" events, will be answered from within[2]; but they say that no
" one has ever yet been able to penetrate to the extremity of
" the passage, being opposed by the Demons and Genii, whom
" they believe to dwell there; and superstitiously imagine
" that all lights taken in there will go out of themselves. Sir
" John Chardin and M. le Brun, however, penetrated a con-
" siderable way into this passage, till. they relate, it ended
" in a path too narrow to admit further progress. As no
" account has hitherto appeared of these subterranean
" passages, but what the superstition of the natives had chosen
" to invent, it may not be deemed presumptuous in giving a
" conjecture, that they were originally intended as a place for
" concealed treasure. a custom time immemorially observed,
" and to this day subsisting amongst Eastern Princes. Not
" having lights with us, neither Mr. Jones nor myself thought
" proper to explore the passage."

7.

Extract from Sir William Ouseley's "Travels in Various Countries of the East and more particularly Persia," 1811.

"Chardin appears to have ventured in these tempting
" excavations beyond any other European. One of these,
" near the tombs, into which I advanced until stagnant water
" and foul air rendered further progress almost impossible,

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[1] This mistaken translation of the word *Charkh*, a wheel, repeated by Sir William Ouseley, appears to me to have its origin in the fact that the sky, which moves unceasingly on over our heads, is often in Persian poetry alluded to as the relentless "wheel" of fate.—C. M. G.

[2] It may be well to mention that I never heard any allusion made to the oracular powers attributed here to the Diamond Wheel.—C. M. G.

"leads to a talismanick diamond; this, with the assistance "of a most vigilant dragon, guards such inestimable treasures "as baffle all description. A Persian who, two or three "centuries ago, had crept through this subterraneous laby- "rinth and obtained one momentary glance at the *charkh* "*almas* (چرخ علماس), or "Diamond of Fate," was so "terrified and astonished at the vision, that he expired on his "return to the entrance before he could relate half the "wonders of the cavern. I have reason to suspect that a "neighbouring passage has been, within some few years, "purposely obstructed by masses of stone, lest the treasures "might become a prey to European infidels."

8.

Translation of an extract from the "Asar-i-Ajam."

[A modern Persian Gazetteer of Fars.]

"The Charkh-i-Almas is in the Takht-i-Jamshid, according "to a widespread belief among the common people. They "say that there is a chamber in which there is a wheel of fire, "and all who enter there must die. Anyone can hear the "noise of the whirling wheel for himself. In short, such are "the foolish and nonsensical tales related about it.

"*Truth of the Matter.*—Towards the southern end of "the great platform of Persepolis there is an opening in the "surface, which has a depth about equal to that of the height "of a man, and is about a yard wide. Below, the road is "found to divide and to run in two directions, the passage "being similar to a water conduit. One can go for a few "paces with a light; but further than that is not easy on "account of the difficulty of breathing the foul air. The "passage slants downwards from the entrance into the ground. "On account of its depth the wind blowing through it makes "a noise, which is said to be that of the Diamond Wheel. "In fact, this hole and passage must have been for the "conduct of water, and it was not at all intended that the "passages should be secret: they were merely cut in every "direction under the platform, and leading out towards the "plain, and were then covered over with slabs of stone. "Anyone who sees the above-mentioned hole for himself will "understand that the stories of the common people are "nonsense."

V.

The Origin of the Name "Mervdasht," the Name of the Plain in which Persepolis stands.

It is said that the ruins of the buildings at Persepolis, known as the Takht-i-Jamshid, are not those of the actual

throne and residence of Jamshid himself, but rather those of the dwellings of his courtiers and attendants. In reality, Jamshid's throne was made of red crystals richly encrusted with jewels, and was fixed on the top of the high pillars, several of which remain standing to this day. When the sun shone on this throne, the whole plain and city of Mervdasht was filled with the light of the reflection from its glittering surface. Now, since the word *Merv* signifies "light," the plain became known as *Mervdasht*, i.e., the " Plain of Light."

VI.

The History of the Foundation of Persepolis, and the Reason for the name Istakhr, by which the Ancient City was known.

According to some of the inhabitants of Mervdasht, there was once a demon, by name Arsalan, who ruled over Mazandaran and all the demons therein resident. In that province was situated his capital, and there he ruled for many years. Finally, however, he became possessed of the idea of extending his dominions, and accordingly set out for Isfahan and Fars accompanied by a suitable army. After much fighting with the kings of that country, and after both sides had suffered much loss, he obtained possession of both Isfahan and Fars. The King of Fars he killed with his own hand, having captured him near his capital, which was situated at Meshed-i-Murghab (Pasargadae). A short time after he repented him of this deed, and sought for a means whereby to make reparation. Now the dead king had left a daughter by name Shahnaz, whilst the conqueror had a son called Amir Istakhruj. Arsalan formed the idea of marrying his son to the girl. Since he himself was old and feeble, and realised that he had not long to live, he selected the plain of Mervdasht as a site for his son's capital, and there built the Takht-i-Jamshid. When the place was completed he set Amir Istakhruj on the throne and had the marriage ceremony duly celebrated. The town received the name of Istakhr in honour of his son—the two names being similar. Arsalan then appointed a Wazir over Fars to help his son in ruling the country, whilst he himself returned to Mazandaran. There he put one of his other sons on the throne of that country, so that he might himself retire from the cares of government. It is said that the Wazir of Fars was an exceedingly able and clever man who occupied himself in the improvement of the subjects of his master. The whole of the inhabitants were divided into groups, and to each was assigned some particular class of work. By his policy he soon endeared himself to high and low, rich and poor. As a memorial of their work he ordered that the images of the

leaders of the army, the administrators of the kingdom, and the chief artisans should be cut in the face of the rock at Persepolis. The length of the reign of Amir Istakhruj was 400 years, and on his death Amir Alhang, his eldest son, came to the throne. The Wazir, however, survived the death of his master by about two years. Amir Alhang turned out to be a worthless and incompetent ruler, and not long after the death of the Wazir, his kingdom was utterly destroyed and the rule of the demons came to an end.

VII.

Belief that the Figures at Persepolis are Charms by which the Spirits of Disease, etc., are held in Bond.

1.

Many of the villagers of the plain of Mervdasht say that the *Takht*, or platform, did not belong to Jamshid, but to King Solomon. According to them the figures of beasts engraved on the stones of the buildings are plagues and diseases which were magically changed into stone images by the King. For instance, the lion is supposed to be the spirit of cholera, the tiger that of plague, etc., etc. It is said that certain of these charms have been broken by Europeans, with a result that disease and sickness have become more rife in Fars than in former days.

2.

The following story is supposed to have been related by a Persian who had been for long in the employ of Europeans in Shiraz. According to him, one day one of his masters was at Persepolis, where he extracted a red stone from a wall. Some people of the neighbourhood present asked him what he wanted the stone for. He replied that the stone was a charm against cholera and hornets, and that so long as the stone remained in its place in the wall cholera and hornets would not be troublesome in the Province of Fars. He, however, carried off the stone, and the Shirazis hold that since that time cholera has been prevalent in the city, and that hornets and other stinging insects have been more troublesome than formerly.

VIII.

Belief that the Stone Figures at Persepolis were beings over whom a Spell was cast.

The people of the neighbourhood of Persepolis relate that at one time the country of Persia was in the hands of Jins.

Everyone who disobeyed their rule was at once cast under a spell and changed into some strange form other than his own. It is believed that the two great stone figures of strange shape with the body of a beast and the head of a man, at the main entrance, are those of two such persons who had offended and were immediately changed from their true forms into those of stone which are still to seen of all.

IX.

The Takht-i-Taus, or Peacock Throne.

(*Situated in the plain at a short distance from the great platform of Persepolis.*)

It is said that the platform of the Takht-i-Taus was built before the construction of the Takht i-Jamshid, and that up to that time it had been the residence of the Persian kings. It is supposed to have been constructed by Kiumurs, who had two sons, one named Taus, and the other Siamak. The former was the elder, and was designated as the heir to his father's throne. The Takht-i-Taus was built for the express purpose of his residence, and contained a room the walls of which were made of gold and ornamented with precious stones and jewels. However, soon after the Takht was completed Taus was poisoned, and Siamak became heir to the throne in his turn. But the second son had no better fortune than his brother, as he was shortly afterwards killed in battle. The inhabitants of Mervdasht say that there is much buried treasure in the neighbourhood of the platform which is unearthed from time to time. Even at the present day, after the heavy rains of early spring, the villagers go to the Takht, where they sift and wash the sand for particles of gold and jewels, and each is rewarded for his labour according to his luck.

X.

The Naqqareh Khaneh, or the supposed Fire Temple at the Naqsh-i-Rustam.

The story told about this building is that, after the death of Tahmurs, his nephew, Jamshid, came to the throne and built the Takht-i-Jamshid. Later, having become absolute ruler over the country far and wide, Jamshid proclaimed himself as a god, and issued orders that his subjects should fall down and worship him at a certain appointed time each day. In order to mark the time for this reverence, drums were beaten in the building at the Naqsh-i-Rustam, which thereby became known as the *Naqqareh Khaneh*, or drum house.

XI.

The Two Stone Altars at the Naqsh-i-Rustam.

There are two stone altars at the Naqsh-i-Rustam, which are known to the Persians of the present day as the Sang-i-Dallaki, *i.e.*, the barber's stones The history of the name was given as follows: In ancient times a party of strangers came to the plain of Mervdasht to settle there. According to their religious beliefs, the sacrifice of one daughter in a family of five was considered incumbent. A few days previous to the appointed day, the unfortunate girl, doomed to death by being born to the lot of having four elder sisters, was led round to the houses of all her friends and relations residing in the neighbourhood in order to be feasted and to bid them farewell. Three days previous to the final act, a large red flag was hoisted and drums beaten to notify the people of what was going to take place, and to warn them to collect to the spectacle. On the morning of the third day the girl was clothed in fresh clean apparel and adorned with jewels and ornaments. She then took farewell of the assemblage, whilst a barber shaved off some of her hair to be retained in remembrance by her father and mother. When the appointed time arrived the father had to take his daughter by the hand and lead her to the top of the pile of wood, which was piled beforehand on the sacrificial stones. He then descended and had to apply the light with his own hand. The barber was always a woman, as is shown by the figures on the altars themselves. By reason of the prominent part taken by the barber in the ceremony, the stones became known as the Sang-i-Dallaki.

XII.

The Fourth Bas-Relief at the Naqsh-i-Rustam.[1]

The villagers believe that at one time Jamshid was at war with his enemies, and that his army was defeated and put to flight. Whilst the soldiers were still fleeing they met with one of the King's officers, who stopped them, and, notwithstanding the fact that he was opposed by greatly superior numbers, took up a position to oppose the victorious pursuing enemy. After a fierce fight he was successful, and thereby won the King's favour. In honour of his brave deed Jamshid directed that his image should be cut in the face of the rock at the Naqsh-i-Rustam as a lasting memorial.

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1 Representing the triumph of Shapur over the Roman Emperor Valerian.—C. M. G.

XIII.

The Well of Chah-i-Kaleh-i-Bandar, near Shiraz.

1.

The story runs that not only were Jamshid's ministers and officers capable and able men, and continually occupied in their various duties, but that the King himself took private measures to keep himself fully informed as to everything which was passing in his kingdom. For this purpose he retained numerous agents and spies throughout the length and breadth of the land to act as his eyes and ears. It is said that the underground passages which have their exit on the great platform of Persepolis were constructed for the use of these agents when coming to make their secret reports to the King. There were said to be four passages, one from each point of the compass, and at the end of each was a secret staircase which led up close to Jamshid's throne poised on the top of its pillars.[1] One of these secret passages is supposed to have its termination in the bottom of the well of the Chah-i-Kaleh-i-Bandar, *i.e.*, the well of the harbour fort.[2] The well is a very deep one, and is situated at the top of a hill in the neighbourhood of Shiraz overlooking the tomb of he poet Sa'di.[3] The spies of Jamshid coming from the south were supposed to enter the well, and having traversed the underground passages, to deliver their reports in secret to Jamshid, subsequently returning by the same route to their respective posts.

2.

Another story relates that all Jamshid's food used to be cooked at Shiraz, whence it was rapidly conveyed to his table at Persepolis through the underground passages. It was believed that the dishes were brought over the thirty to forty miles of distance in an incredibly short space of time by being passed from hand to hand of a numerous band of servants who formed a chain between the two places.

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[1] *Vide* No. V.

[2] The well owes its name to the general belief that anything thrown down into it at Shiraz will be found floating in the sea some three days later near the harbour of Bushire.—C. M. G.

[3] I mig t mention the fact that I was told by some of my friends in Shiraz that the Persian inhabitants of the place believe that there is hidden treasure in the well; and as it is supposed that every European is always in search of hidden treasure, no Eur pean is ever able to visit the well without being shadowed by one or more Persians.—C. M. G.

28. Stone Implements from the Têngyüeh District, Yünnan Province, Western China.

(With a short account of the beliefs of the Yünnanese regarding these objects.)

By J. Coggin Brown, B.Sc., F.G.S., F.C.S.

The only previous description of stone implements from this district which I have been able to find is given by Dr. John Anderson, who accompanied the expedition under Major Sladen, from Burma into Yünnan in the early part of the year 1868. Unable to proceed beyond Têngyüeh, owing to the disturbed state of the province consequent upon the Mahomedan rebellion, the members of the expedition stayed in the town for some months.[1] Upwards of 150 specimens were purchased during this enforced residence. They were fashioned out of the following rocks, *viz.*, quartz, Lydian stone, chert or hornstone. jade, agalmatolite, basalt, greenstone, sandstone, schist, clayslate, and a brown, calcareous, shale-like rock. Only 23 specimens, however, are figured and described. Their collection is related in the following words[2] :—

> "Noticing a stone implement exposed for sale on a stall in the Momien bazar, I purchased it for the equivalent of a few pence. No sooner was my liking for such objects known than I was besieged by needy persons who willingly parted with them for sums varying in value from four to eighteen pence each. After my first investment, specimens to the number of about one hundred and fifty were procured by different members of the Expedition; but all were purchased, none being discovered by any of us. Most were obtained at Momien, and a few in the Sanda valley."

Têngyüeh Ting or Momien, as it is known to the Burmese, is an important frontier town in the western prefecture of the province of Yünnan. It is situated in Lat. 25° 2′, and Long. 98° 33′, 112 miles north-east of Bhamo in Upper Burma, and at

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[1] An account of the travels of this expedition is to be found in the following works: (1) "A Report on the Expedition to Western Yunnan, *vid* Bhamo," by John Anderson, M.D., Calcutta, 1871; and (2) "Mandalay to Momein," — a narrative of the two expeditions to Western China of 1868 and 1875, by Jo n Anderson, M.D., London, 1876.

[2] "The Stone Implements of Yunnan, with of a bronze, axe-like weapon from the Sanda Valley"—appendix C. pp. 410-415 of Anderson's 1871 Report.

an elevation of 5,365 feet above the level of the sea. The town itself is built on a small plain, surrounded on all sides by bare hillsides which rise up to a maximum height of 9,050 feet above the sea in the mountain Lu-tsung-shan. The absence of trees and scrub vegetation, and the fact that the lower slopes of the hills as well as the plain itself are carefully ploughed up year after year for purposes of cultivation, is sufficient to account for the unusual numbers of stone implements found in the neighbourhood, whilst few or no specimens are recorded from the thickly forest-clad and sparsely populated adjoining areas in Burma.

I propose describing a representative series of twelve stone implements here, selected from numerours specimens which I have recently examined in Têngyüeh.

Nine of these specimens are fashioned from various varieties of jadeite, the other three being cut from :—

(*a*) A hard, red, fine-grained, slate-like rock (see figs. 8 & 8*a*.)

(*b*) A hard, fine-grained, white quartzite (see figs. 1 & 1*a*.)

(*c*) A dark-coloured, basaltic igneous rock (see figs. 2 & 2*a*.)

The exact nature of this igneous rock (*c*) cannot be determined without injuring the specimen. All these specimens were purchased for small sums from their owners. It is much to be regretted that none have as yet been found *in situ* by a trustworthy observer. All the specimens are highly polished and probably belong to the Neolithic period.

Local Beliefs regarding Stone Implements.

It is interesting to note that the Yunnanese attribute a celestial origin to these stone implements and firmly believe that they fall from the sky during a thunderstorm. They say that if the ground is clean the stone after striking rebounds again into the clouds, but if the ground is unclean it penetrates and remains. The local name for these stone implements is "Lei hsieh tzu"[1] (雷楔子) or "thunder-wedges"; the first word having its origin in the above mentioned tradition, and the latter from the resemblance of the majority to Chinese wedges. Another belief is that an implement is always found whenever any object is struck by lightning; it does not make any difference whether the object be a man, animal, or inanimate thing; for example, it is affirmed that if a tree is struck by lightning a stone weapon will be found not more than two

1 "Lei" (Wade's method) is pronounced "Luí" in Western Yünnan.

or three feet distant. The death of three men killed during a thunderstorm in the centre of the Têngyüeh valley last year is put down to the same agency, and it is avowed by the peasantry that if the earth were dug up for a radius of two or three feet around the spot where each of the corpses was found, a stone of a similar kind would be found within a depth of 4 or 5 feet of the surface.

The stones are also said to have occult medicinal properties and to be efficacious in the treatment of the intermittent fever to which the natives of Têngyüeh are sometimes subject, but only when the sufferer is hot and cold by turns and has attacks of the fever on alternate days. The disease proving obdurate and medicinal treatment having no beneficial result the family "thunder-wedge" is taken from its place in the little shrine which is found in every house, and is placed in the breast of the patient, who, a short time before the next attack is due, leaves his home and goes a short distance, perhaps half a mile away, and there waits two or three hours until the time is past, and having suffered no recurrence of the fever he returns home, when the stone is placed again in its sanctified resting place. The origin of this curious superstition is doubtless to be put down to the fact that the stone is believed to become endowed with these healing properties, from its proximity to the family idol and to its sharing with the latter the devotions of the household. In the Jung Chang Fu district stone implements are sometimes placed as propitiatory offerings before the image of the god of thunder in the temple devoted to his worship by sick people.

According to Chinese reports both stone and bronze implements are in the possession of some of the families in Têngyüeh. According to Anderson, both the Burmese and Shans regard stone implements as thunderbolts, and the same idea appears to be prevalent in other parts of Asia, whilst it is certainly not unknown in Europe. Mere coincidence could never ensure such a widespread circulation to this curious superstition, whatever its true origin may be.

Authenticity of the Têngyüeh Stone Implements.

Anderson was not convinced as to the authenticity of some of his specimens, as can be seen from the following paragraph quoted from his paper.[1]

> "The high estimation in which they are held, both in Yunnan and Burmah, suggests the suspicion that the Chinese in former days did not neglect to take advantage of the desire to possess those implements for charms and made a

[1] *Op. cit.*, pp. 411.

considerable trade in their manufacture. A consideration of the character of some of the Yunnan implements has led me to this conclusion. A considerable percentage of them are small, beautifully cut forms with few or none of of the signs of use that distinguish the large implements from the same variety of jade. These facts taken in conjunction with their elaborate finish, and the circumstance that jade was formerly manufactured at Momien into a variety of personal ornaments, are the reasons which have made me doubt the authenticity of many of the smaller forms, and to regard them only as miniature models of the large and authentic implements, manufactured in recent times as charms to be worn without inconvenience."

Although it is possible that some of the smaller implements may not be *bonâ fide* specimens, I am inclined to think that the evidence on which Dr. Anderson bases his argument, is not sufficient to justify the classification of the majority as counterfeits, or the statement that a profitable traffic was ever made in their manufacture. The Yunnanese actually break up the bronze implements to be used as medicine—an unfortunate circumstance for the collector—but I have been unable to prove that this applies to the stone ones as well. It is true that they possess a certain value as charms in the eyes of the more superstitious of the population, but this value cannot be a great one when specimens are usually found amongst the general rubbish of the small pedlar's stalls in the Chinese bazaars, and can be purchased for a few cash.

The fact that the manufacture of jade ornaments, both at the time of Anderson's visit and at the present day forms one of the staple industries of Têngyüeh, is not sufficient to condemn as a forgery any implement made from that material. If the original makers inhabited the district around Têngyüeh—and there is no reason to suppose that they did not—the boulders of a hard and tough stone like jadeite, carried over from the regions in Upper Burma where they are found, would certainly be the best substance at their command, and far superior to either the granite, gneiss, or soft porous lavas which cover so much of the immediate neighbourhood. The case is strictly analogous to that of the polished flint implements of Neolithic age found on the Pennine Range in the northern counties of England, the material for the manufacture of which must have been carried considerable distances, as no suitable stone occurs locally. Many of the flint implements are no larger than the jadeite implements under discussion. Implements of jade and jadeite are also known from other parts of the world.

Again, far from the small forms being miniature models of the large and authentic implements, a study of Anderson's figures or of the drawings of the present collection will show the

majority to be of essentially different shapes formed for other uses. The reason why no large jadeite implements have been obtained by collectors around Tengyueh, is due to the fact that a large piece of this mineral would have a greater value in the eyes of its Chinese finder, when cut into the form of rings and ear pendants than in its original shape, in spite of its magic origin and healing properties.

Descriptions of Specimens.

Figures 1 and 2 represent the largest stone axes in the present collection. Figure 1 is a long, tapering instrument with convex front face, curving gently towards the cutting-edge. The side faces are rounded off to meet this face. The back face bears a well-marked flat, medial area bounded by sloping sides, which meet the two outer side faces somewhat abruptly towards the cutting-edge, but smooth off more gradually towards the other end of the instrument. The reason for this unusual form is doubtless to give greater purchase to the holder in which the stone was fastened, or to the fingers if it were held in the hand. The implement is thick and somewhat heavy for its length. The blunt end is broken slightly, but appears to have been rounded originally. The cutting-edge is very well worn, betokening considerable use. There are three ancient fractures near the cutting-edge on the back face. The tool is fashioned from hard, greyish-white, fine-grained quartzite, now stained and discoloured. The whole surface has been well polished. Figure 1*a* gives a side face view of the implement. All the figures are drawn natural size.

Figure 2 is a slightly smaller axe of the same general characters except that both faces are convex and symmetrical. It is of uniform width for a little less than half the distance from the cutting-edge to the rounded blunt end, but above this point it tapers rapidly. Both the back and front faces curve gently towards the edge, but slope at a smaller angle towards the other end. The side faces are almost parallel as far as the same line and then slope rapidly. The blunt end is well rounded off. The front and back faces appear to have been highly polished, but the side faces are not so highly finished. The cutting-edge is worn and chipped and bears the marks of considerable use.

Figures 3 and 4 represent another type of stone axe, smaller, flatter, and more triangular than figures 1 and 2; figure 3 is an irregular shaped axe of a striped variety of jadeite (?); the stone is mottled in different shades of brown and yellow. The slope towards the cutting-edge in both the large faces commences about one-third of the total length from the blunt end. The two smaller side faces are planes formed by grinding down the stone; they meet the cutting-edge in elongated points. The

cutting-edge is disposed somewhat obliquely towards one side, but this is probably an original feature, rather than a secondary one produced by wear. The blunt end is irregular but has been roughly rounded off. The general shape of the implement is broadly triangular.

Figure 4 is a drawing of a smaller axe-like implement of the same type. It is composed of a white and greyish clouded jadeite, weathered in places which show brownish yellow stains. The side faces are more divergent than those of figure 3, and the edges in which they meet the front and back faces have not been ground down. The blunt end is roughly squared off. The state of the cutting-edge indicates that the implement has been well used.

Figures 5, 6, 7, and 8 represent the chisel forms of the collection.

Figure 5 is a broad almost square form of blueish clouded jadeite, exhibiting cracks and lines of decomposition. The material is translucent at the edges. The front face of the implement is convex in the lower part, but parallel with the back face higher up. The back face is almost flat but has been slightly ground to improve the chisel edge. The upper part ends in a rough fracture and a portion of the implement is evidently wanting. The side faces which are broadly divergent and quite flat meet the edge in sharp angles, and the large faces abruptly. The cutting-edge is chipped and broken and evidently well worn.

Figure 6 depicts a somewhat larger and thicker implement of the same kind; it is made of the same kind of stone as Figure 4. Both sides are slightly convex, but the front face is also ground at a sharp angle in order to form the chisel edge, the angles with the side faces being rather truncated. The cutting-edge is fractured at one end.

Figure 7 illustrates a more triangular implement of the same type, made of a hard reddish slate-like rock with smooth divergent flattened sides and the front and back faces approximately parallel above the line from which the front face is bevelled off to form the edge of the implement. The back face (that is to say, the one which is not bevelled), is flatter than in the previous examples (figures 5 and 6), and the blunt end is abruptly cut off parallel with the cutting-edge. The implement bears two ancient fractures on its front face and is coloured black in places.

Figure 8 is an illustration of a small elongated chisel-like implement belonging to another type, cut from a greyish-white fibrous jadeite with red mottlings. The implement is abnormaly long for its breadth. The back face is very slightly convex, the front face flat except where it is bevelled off to meet the back face and form the edge. The side faces are at first approximately parallel and then converge slightly towards

the top, which although somewhat broken is seen to have been formed by a flat area meeting the side faces in sharp angles. The side faces are smooth with their edges well rounded off. The cutting-edge is chipped and worn.

Figures 9 and 10 represent another type of small rounded axe-like implements with strongly curved cutting-edges.

Figure 9 is a broad, flattened type in a mottled greenish-blue jadeite. Its most striking feature is the fine cutting edge, fully half of the sides of the stone being ground away to form it. Above this line both faces are convex. The side faces are very narrow, blunt, and continuous with both the cutting-edge and the other end of the implement, into both of which they have been rounded off.

Figure 10 illustrates an implement of the same general type cut from a blue jadeite. It differs from the preceding one by reason of its broader side faces and more unfinished blunt end. One of the side faces bears an old fracture and the cutting-edge is well worn.

Figure 11 is a small, unusually broad type, in a pale greyish-blue jadeite. The side faces are convergent and meet the acute cutting-edge in sharp angular points. The blunt end is abruptly truncated. Both front and back faces are bevelled off at a greater angle than usual in order to produce the long wedge-shaped cutting-edge

Figure 12 represents the smallest implement in this collection. It has been formed from a thin water-worn pebble of a dark grey jadeite with white markings. The pebble has evidently been broken across the middle, and the cutting-edge produced by rubbing down the two faces at an acute angle to the fractured end. The angles in which the edge meets the sides have not been rounded off.

29. NUMISMATIC SUPPLEMENT No. XI.

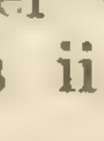
Note.—The numeration of the article below is continued from p. 592 of the "Journal and Proceedings" for 1908.

60. A Find of Græco-Bactrian Silver Coins.

Towards the end of 1899, owing to erosion of the west bank of the Indus river at the village of "Parehwar" near Amarkoṭ in the Rājanpūr Tehsil of the Dera Ghāzī Khān District, an earthen vessel was exposed containing 221 demi-drachmas of Apollodotus ii, Philopator (B.M.C., *Greek and Scythic Kings*, p. 37).

They were sent to me from Calcutta for report. After much trouble in cleaning them I found they fell into the following groups:—

A.—Philopator.

			Number of Coins.	Total.
(1)	Like B.M.C.,	No. 4.	42	
(2)	Ditto,	No. 5.	26	
(3)	Ditto,	No. 6.	1	
(4)	Monograms gone,		5	
(5)	Monogram  *Kha* (Bühler's Table III, III—8), to right on reverse (Base silver).		22	
				96

B.—Soter, without Philopator.

			Number of Coins.	Total.
(6)	Like B.M.C.,	No. 7.	1	
(7)	Ditto,	No. 8.	4	

Not in B.M.C.:—

(8) Monogram ,to right on reverse. 1

	Number of Coins.	Total.
(9) Monogram , to right on reverse (Base silver).	1	
(10) Monogram , to right on reverse.	3	
(11) Monogram as on (5), to right on reverse (Base silver).	11	
(12) Monogram, L.M.C., pt. iii, No. 42 to right, and No. 45 (same cat.) to left, on reverse.	61	82
C.—Too much worn to determine group.	43	43
		221

With the exceptions noted, *i.e.*, (5), (9), (11), all are of good silver.

W. Vost.

61. Governors of Sind.

In 1907 I examined for the Society 74 small silver coins of these rulers sent from Ajmir with the Assistant Commissioner's No. 3552, dated 12th August 189.), and No. 1239, dated 2nd May 1901. They were found "on the site of an old demolished fortress" near "Jaola."

The find contained coins for the most part given in L.M.C., pt. ii, pp. 9, 10 :—

				Coins.
	'Abdulla	Like No.	1 ..	4
Walī	'Abdulla	,, ,,	2 ..	2
Banū	'Amrwīya	,, ,,	6 ..	22
,,	'Alīwīya	,, ,,	7 ..	13
,,	'Abd ur Raḥman	,, ,,	8 ..	2
,,	'Ḥātimwīya	,, ,,	9 ..	1
	Muḥammad	,, ,,	4 ..	1
,,	,,	,, ,,	11 ..	3
Banū	'Abdulla	.. ..	..	3
	'Amrāō	.. ..	..	2
Name not read		.. ..	..	1
				54
		Illegible	..	20
				74

A coin of Banū 'Abdulla is not given by Rodgers :—

Obverse	*Reverse*
الله	ن
محمـــد	با للـــه بنو
رسول	عبد اللـــه
الله	و ناصر
عبد الله	٥
٥	

The name 'Amrāō on coins of Sind also appears to be new. The two specimens examined are illegible on one side, and on the other have

...
عمـــراو
و ناصر

'Amrū is a common name in early Sind history (Elliot, *History*, i, 126 127). The 'Amrāō of the coins is perhaps "'Umaro, son of the unfortunate Muḥammad, son of Ḳāsīm, the Conqueror of Sind, [who] was made Governor of Maḥfúẓah, and was greatly trusted by Ḥakam, * * * and was elevated to the rank of Amír" (Elliot, *History*, i, 126; Raverty in J.A.S.B., 1893, 256, quoting the Balaẓirī who wrote about 270 H. = 883-84 A.D.).

W. Vost.

62. Some rare Silver and Copper Coins of the Bahmanī Kings of Gulbarga or Aḥsanābād.

In April 1906 I went to Gulbarga for a day, and was fortunate in securing there no less than 25 silver Bahmani coins. Of these I describe eight below (Nos. 1-8). Nos. 9 and 10 are also from my cabinet.

1st Sulṭán.

Álāu-d-dīn Bahman Shāh I (*Ḥasan Gángú*), A.H. 748—759.

No. 1. *Æ*

Weight, 169 grains.
Size, 1·1 inch.

Obverse.	*Reverse.*
السلطـــان الاعظـــم	In a square inscribed
علا الدنيا و الدين	in a circle.
ابوالمظفر بهمن شاه	سكندر الثاني
السلطان	يمين الخلافة ناصر
	امير المومنين

Margin on the reverse, outside the circle, partly visible, reads بحضرت احسنا باد.

Date, in the lower segment reads (٧)٤٧ Pl. XII.

No. 2. Æ

Weight, 169 grains.
Size, 1·1 inch.

Obverse.
As No. 1.

Reverse.
As No. 1.
Date in lower segment.

No. 3. Æ ٥٤٨ Pl. XII.

Weight, 170 grains.
Size, 1·1 inch.

Obverse.
As No. 1.

Reverse.
As No. 1.
Date ٧٤٨ in lower segment. Pl. XII.

Coin No. 1 is remarkable both for the early date and the partial presence of a marginal legend. In No. 2 the substitution of small circle for the "٧" in the first digit of the date is noticeable. My friend Mr. Cowasjee Eduljee Kotwall has a coin similar to this one.

No. 3 is similar to the coin described by Mr. Gibbs (Num. Chronicle 1881, No. 1) and is published for the sake of comparison with the other two.

2ND SULṬÁN.

Muḥammad Shāh I bin Bahman Shāh, A.H. 759—777.

No. 4. Æ

Weight, 170 grains.
Size, 1·05 inch.

Obverse.
السلطان
العهد و الزمان
حامي ملت رسول
الرحمن

Reverse.
In a square.
ابو المظفر
محمد شاه بن
بهمن شاه السلطان
Right margin احسنا باد
Lower ,, ٧٧٧
Pl. XII.

The year hitherto accepted for the close of this Sulṭán's reign is 776 Hijri. This coin indicates that Muḥammad Shāh was reigning in A. H. 777.

5TH SULṬÁN.

Muḥammad Sháh II bin Maḥmúd Kháṉ bin Alāu-d-din Bahman Shāh A.H. 780—799.

No. 5. *AR*

Weight, 169 grains.
Size, 1·1 inch.

Obverse.	*Reverse.*
الناصر لدين	In a square
الدنان الحـــامي	الواثق بقائد
لاهل الايمان	الرحمن ابو المظفـــر
	محمد شاه السلطان
	Right margin احسانا باد
	Lower ,, ٧٩٦

Pl. XII.

7TH SULṬÁN.

Shamsu-d-dín Dáúd bin Muḥammad II, A.H. 799.

No. 6. *Æ*

Weight, 169½ grains.
Size, 1·0 inch.

Obverse.	*Reverse.*
المستوثق بالله	داود شاه
الحذان ابو المظفر	السلطـــان بن
شمس الدنيا و الدين	السلطان
	Lower margin ٧٩٩.

Pl. XII.

Two other rupees only of this king have been published. Mr. J. Gibbs and Dr. L. White King each possessed a specimen.

8TH SULṬÁN.

Fírūz Shāh.

No. 7. *Æ*

Weight, 169 grains.
Siz , 1·05 inch.

Obverse.	*Reverse.*
السلطان	In a square
العهـــد و الزمان	ابو المظفـــر تـــاج
الواثق بقائيد	الدنيا و الدين
الرحمن	فيروز شاه
	السلطان
	Right margin احسنا باد
	Lower ,, ٨٠٠

Pl. XII.

No. 8. *Æ*
Weight, 171½ grains.
Size, 1·2 inch.

Obverse.
السلطان
العهـــد و الزمان
الواثق بتائيد الرحمن
ابوالمظفر

Reverse.
In a square
تاج الدنيا
و الدين فيروز
شاه السلطان
Left margin ضرب
Upper ,, بحضرت
Right ,, احسنا باد
Lower ,, ۸۲۱
Pl. XIII.

Fírúz Sháh's silver coins of the type similar to No. 8 are well-known. No. 7 is a different type. The words ابو المظفر occur on the reverse of the coin instead of the obverse as is usual.

Coins of the same type as No. 8 are known with dates from 800 to 825.

I know of no other coin of the type of No. 7.

I therefore conclude that the type must have been changed in the latter part of A.H. 800.

Some change appears to have been made in the character of the writing during the year 804. Coins of this year present two types. The difference is to be seen in the formation of the ج of تاج and the فير of فيروز.

10th Sulṭán.

Álāu-d-dín Aḥmad Sháh II, A.H. 838—862.

No. 9. *Æ*
Weight, 169 grains.
Size, ·95 inch.

Obverse.
السلطان
العليم الكريم
الرؤف على عباد الله
الغني المهيمن

Reverse.
In a square.
ابو المظفر علا
الدنيا و الدين احمـــد
شاه بن احمد شاه
الولي البهمني
Left margin ضرب
Right ,, احسنا دبا
Lower ,, ۸۴۴
Pl. XIII.

This is the earliest dated coin published of this king.

14th Sulṭán.

Maḥmúd Sháh, A.H. 887—824.

No. 10. Æ

Weight, 169½ grains.
Size, ·95 inch.

Obverse.

المتوكل على
الله القوى الغنى
السلطان الاعظم

Reverse.

In a square.
ابو المغازي
محمود شاه بن محمد شاه
الولي البهمني
Lower margin ٨٨٧

This coin is of the first year of this king. Pl. XIII.

17th Sulṭán.

The copper coins Nos. 11 and 12 described below are of Walí-ullah Sháh, and Kalím-ullah Sháh, 17th Sulṭán and 18th Sulṭan respectively, both sons of Maḥmúd, as will be seen from their legends.

Walí-ullah Sulṭán bin Maḥmúd.

No. 11. Æ

Weight, 250 grains.
Size, ·85 inch.

Obverse.

بنصر الله
الموید المالك
القوي الغني

Reverse.

ولي الله
السلطـــان بن
محمود شاه
البهمني Pl. XIII.

18th Sulṭán.

Kalím-ullah bin Mahmúd.

No. 12. Æ

Weight, 250 grains.
Size, ·85 inch.

Obverse.

As No. 11.

Reverse.

كليم الله
السلطان بن
محمود شاه البهمني

Pl. XIII.

In his notes of the Bahmani dynasty—written in November 1904. Major W. Haig (*vide* J.A.S.B., Part I, Extra No. 1904)

expresses some doubt, like others, regarding the parentage of Kalím-ullah, whether he was son or younger brother of Aḥmad Sẖáh III. He says he has seen copper coins of Kalím-ullah, and has a specimen, but unfortunately they do not bear his father's name.

I have some half-a-dozen copper coins (like No. 12) of this Sulṭán on which the word *Maḥmúd* is quite plain. We can therefore assume that Kalím-ullah was a son of Maḥmúd, and consequently brother of Aḥmad Sẖáh III the 15th Sulṭán, 'Aláu-d-dín Sẖáh III the 16th Sulṭán, and Walí-ullah Sẖáh the 17th Sulṭán.

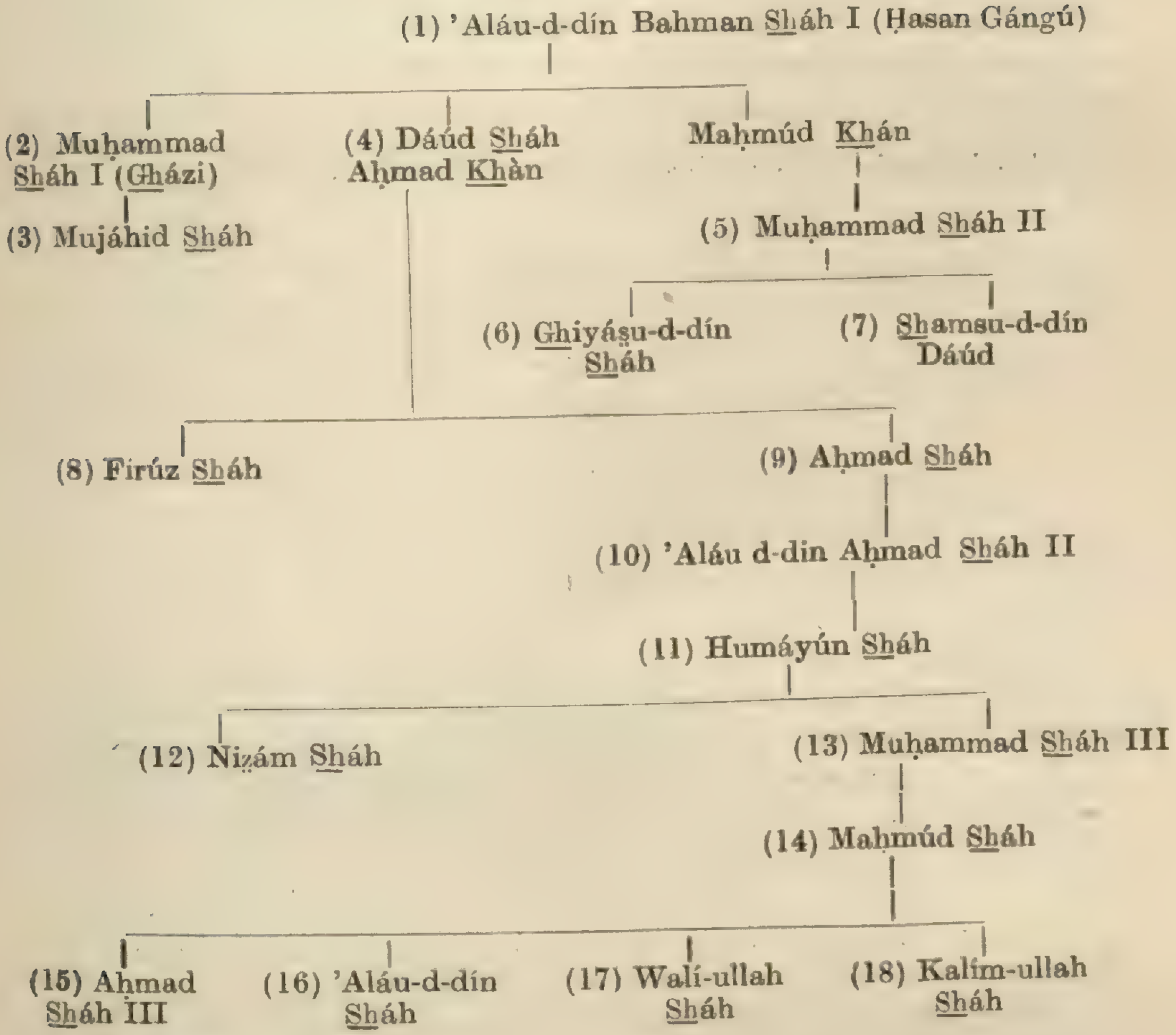
For easy reference I give below a list of the Bahmani Sulṭáns and also a table showing their pedigree gathered from different sources.

My special thanks are due to Mr. H. Cousens, Superintendent of the Archaeological Survey, Western India, for his kindness in taking casts and photographs of the coins above described for the purpose of plates to illustrate this note.

Framjee Jamasjee Thanawala.

No.	Sultáns.	Years A.H.	Years A.D.
1	'Aláu-d-dín Bahman Sẖáh (Ḥasan Gángú)	748—759	1347—1358
2	Muḥammad Sẖáh I ..	759—777 ?	1358—1375 ?
3	Mujáhid Sẖáh ..	?777—780	1375 ?—1378
4	Dáúd Sẖáh ..	780	1378
5	Muḥammad Sẖáh II ..	780—799	1378—1397
6	Ghiyáṣu-d-dín Sẖáh ..	799	1397
7	Sẖamsu-d-dín Dáúd ..	799—800	1397
8	Fírúz Sẖáh ..	800—825	1397—1422
9	Aḥmad Sẖáh I ..	825—838	1422—1435
10	'Aláu-d-din Aḥmad Sẖáh II	838—862	1435—1457
11	Humáyún Sẖáh ..	862—865	1457—1461
12	Niẓám Sẖáh ..	865—867	1461—1463
13	Muḥammad Sẖáh III ..	867—887	1463—1482
14	Maḥmúd Sẖáh ..	887—924	1482—1518
15	Aḥmad Sẖáh III ..	924—927	1518—1520
16	'Aláu-d-dín Sẖáh ..	927—929	1520—1522
17	Walí-ullah Sẖáh ..	929—932	1522—1525
18	Kalím-ullah Sẖáh ..	932	1525

PEDIGREE TABLE.



63. Addenda to the Mālwā Coinage.

A large find of nearly three thousand copper coins from Naosar village in Harda Tahṣil of the Hoshangābād district was recently sent to me for examination. A very large proportion of the coins were of the Mālwā Sulṭāns of the usual square type, the remainder being round coins of the Gujarāt dynasty—evidently brought in by that conquering power during its supremacy in Málwa. Out of some 700 selected for distribution among the various Museums, no less than 653 were of Maḥmūd II, son of Nāṣir Shāh, who reigned from A.H. 916 to 937. Each year of the reign except 916 and 933 was represented, the most common date on the coins being 931. But the chief interest of the find lay in sixteen coins, of which six were of Maḥmūd's rival, Muḥammad, bearing dates 917 and 921, two of Bahādur Shāh dated 938, and eight of Qādir Shāh dated 945. None of these latter ten have been previously published.

Dr. White King in his monograph on the coins of Mālwā published in the Numismatic Chronicle, 1904, pp. 62—100 and 356—398 has ascribed two square dateless coins to Bahādur

Shāh of Gujarāt but has not figured them or given their legends. They were probably of the usual Mālwā type. In the absence of special notice it is unlikely that they were of the type now published, which is quite distinct from that used by the Khaljī Sulṭāns.

The legends are as follows :—

Obverse.

و الدين
قطب الدنيا
٩٣٨
ابو الفضل

Reverse.

بهادر شاه
بن مظفر شاه
السلطان

Of Qādir Shāh no coins have hitherto been described. As stated by Dr. White King, this king, "though practically independent, owned nominal allegiance to Bahādur Shāh of Gujarāt." Bahādur was killed in A.H. 943 and after a short interval the throne of Gujarāt was occupied by Maḥmūd son of Laṭīf. Dr. White King has recorded that "through the good offices of his friend 'Imādu-l-Mulk the Wazīr of Sulṭān Maḥmūd III of Gujarāt, Qādīr Shāh was granted the privilege of the Royal Umbrella and the right of striking coins."

The eight coins now found bear testimony both to the exercise of the right of coining by Qādīr Shāh and his acknowledgment of the suzerainty of Maḥmūd. The legend on the obverse is not altogether free from difficulty owing to the fact that the coin is not large enough to contain the whole of it, and the specimens found are not in very good condition. I read the legends as follows :—

Obverse.

السلطان
قـــادر شـــاه
بن
شاه احمد (?)
محمود ٩٣٥

Reverse.

السلطان
بن
٩٣٥
السلطان

Above the ط of the lower السلطان is the ornament figured as No. 21 in the Catalogue of the Indian Museum, 1907, p. 261,

and above the ط of the upper السلطان the ornament figured as No. 23 in the same plate.

The words following شاہ in the third line of the obverse are a difficulty. None of the coins give then very distinctly. After much consideration I am inclined to think they may be a blundered بن لطيف

These coins of Bahādur Shāh and Qādir Shāh are of special interest as filling up a gap in the history of the coinage of the Mālwā dynasty.

H. Nelson Wright.

64. The Quṭb-Shāhis of Ḥaidarābād or Golconda.

A large find of 3,800 copper coins dug up in the Wun District. Berār, contained a considerable number of coins which may be assigned to 'Abdullah Quṭb Shāh. For the complete reading I am indebted to Major W. Haig, I.A., who writes: "I have been looking into the question of the Ḥaidarābād coins of 1068 H. (A.D. 1657-58). The obverse, as you say, is clear :—

دارالسلطنه
ضرب حيـــدرباد

In that year 'Abdullāh Quṭb Shāh (1626-72) was king of Golconda, but his name does not appear on the reverse. where the legend is a very touching one. He had already been attacked by Aurangzeb and compelled to marry his second daughter to Aurangzeb's eldest son, Sulṭān Muḥammad, whom he made his heir. He foresaw the speedy downfall of his kingdom, which came to an end with his successor, Abū'l Ḥasan, and predicted it on his coins in a legend which was also, I believe, used after him by his son-in-law Abū'l Ḥasan, *viz*:—

و السعـــادة
ختـــم بالخيـــر
١٠٦٨
سنه

I have coins with the legend arranged as follows :—

د
و سعـــادة
ختـــم
١٠٦٨
بالخيـــر

'It has come to an end, well and auspiciously.' I think that this is the best conceit I know in Oriental Numismatics.''

The coins under reference were of the second variety described by Major Haig. They were evidently current for some time as the other coins in the find bore later dates, being chiefly dāms of Aurangzeb from the Sūrat mint, as far as they could be read. Major Haig's supposition that Abū'l Ḥasan also used this type is borne out by the dates on some specimens, which read 1095 A.H.

R. Burn.

65. Some New Mughal Mints and Rare Mughal Rupees.

The rupees in Plates i, ii, and iii, with the exception of the last two in plate iii, are from a find of 1,388 coins in the Jhānsī District, U.P., in 1907. It contained specimens from two new mints of Akbar, Nahrwāla Pattan and Gaẕraula, or Gadraula, and new or rare rupees of the Ujjain, Ājmīr, Bangāla, Akbarpūr-Tānda, Āgra, Ḥiṣār-i-Fīrūza, Elichpūr and Bālāpūr mints of Akbar, and of the Bairāta and Jālnapūr mints of Jahāngīr. Plate iii, 7 and 8 illustrate two new mints of Shāh 'Alam ii, Bālānagar-Gaḍhā and Ravishnagar-Sāgar, from coins found in the Central Provinces.

They are described in the following notes. Casts of them were made by me and photographed by Mr. Henry Cousens with his usual courtesy, kindness, and care.

Plate XIV.

Akbar.

Nos. 1 to 10. These rupees form an interesting series from the Ujjain mint. Nos. 1, 2, and 3, of the years 995, 999, and 1000 H., show in the lowermost line traces of ضرب اجین preceded on that of 1000 H., by what appears to be ل of دارال. No. 4 is of 1001 H. Nos. 5 to 10 are dated 37, 38, 39, 40, 41, and 43 Ilāhī, without, however, either the word الهی or the month on them.

In the series محمد and اکبر on the obverse side are so alike I think we are able to assign with a tolerable degree of certainty those of the years 38 to 43 Ilāhī to the Ujjain mint. Ujjain seems not to have issued square rupees with الهی and the Persian month on them until 44 Ilāhī (see L.M.C. No. 207).

The weights and measurements are:—995, 173 grains (rubbed), ·7 × ·7; 999, 176, ·65 × ·65; 1000, 175, ·625 × ·625; 1001, 174, ·65 × ·65; 37, 175, ·65 × ·65; 38, 175, ·55 × ·6; 39, 175, ·6 × ·6; 40, 175, ·65 × ·65; 41, 176, ·65 × ·65; 43, 176, ·65 × ·65.

No. 11, Ajmīr? D. سه و الف —1003 H. W. 175.

S. ·775 × ·775.

Obverse.	*Reverse.*
سه و الف شاه محمد اکبر باد ح جلال ال دین غاز ضر] رب اج ...	Kalima.

There is a second specimen of this rupee of the same year in the Lucknow Museum, but it gives no more assistance in reading the mint which seems to begin with اج possibly for اجمیر Ajmīr. The ح following باد may refer to the "weight or fineness of metal" and represent the initial letter of the word حق 'regular', for which refer to *Manual of Musulman Numismatics*, (Codrington), p. 9. Or ح may stand for حق تعالی, God is great.

No. 12. Bangāla. D. 1011 H. W. 173·5. S. ·7 × ·75.

Obverse.	*Reverse.*
شاه شـــد ۱۰۱۱ اکبـــــر کابرویش ضرب شـــــــــد بنگاله زاند لخواه ســـــــــکه	Kalima.

The legend translated is:— "This coin of Bangāla became attractive on this account, that its value (honour) [increased because it was] struck by Akbar Shāh."

Another Jhānsi hoard recently furnished a rupee of this mint with 39 (=1002—1003 H.) on the Kalima side above the middle of محمد and on it سکه and the dotted بن of بنگاله are clear. It is now in the Lucknow Museum.

The reading Bangāla was first suggested by Mr. Rodgers in the L.M.C., p. 245, which gives two rupees. Mr. H. Nelson Wright has also two, Nos. 315 (*a*), (*b*), in the I.M.C. Each of us differs a little in the obverse reading. In the big Jhānsi find there were 2 of 1006 (date to left of شد), and 2 of 1011 H. (date below شد). Thus there are in Museums in India rupees of 39

Ilāhī (1002—1003 H.), and of 1006, 1009, 1010, and 1011 H. We shonld keep a look out for gold coins of Bangāla, which are noticed by Abū-l-Faẓl.

Bangāla was another name of Gaur. In the *Memoirs of Bāyazīd* (*Bajazet*) *Bīyāt* we have, "an account of Mun'im Khān's removing his headquarters from Tānda to Gaur (which Bāyazīd also calls Bangāla), and of the pestilence which broke out there,"—(see Mr. Beveridge's article, J.A.S.B., 1898, p. 315).

Plate XV.

No. 1. Akbarpūr-Tānda. D. 973 H. W. 174·5.

S. 1·075.

Obverse.

In mihrabi area,
اکبر بادشا
ه
محمد غازي
جلال الدين
Mark apparently peculiar to the Ṣūba of Jaunpūr over بر
Above area, part of
ناصر الدنيا و الدين ابو المظفر
Below area, part of
اکبر ۹۷۳ پور تاندة
with date over بر of
اکبر and پور تاندة on a level with date.

Reverse.

In pentagon with curved sides, the kalima, and in right margins,
بصد]ق ابي بكر بعدل ع[مر
Same mark as in obverse area over د of محمد

No. 2. Akbarpūr-Tānda. D. 974 H. W. 173. S. 1·075.

Obverse.

As on Plate ii, 1.

Reverse.

As on Plate ii, 1, but margins gone, and no mint mark.

The rupees of this mint, L.M.C., Nos. 23, 26, pp 56, 57 of 971 and 973 H. are like those here described, and also the mint mark in the obverse area. I have examined pencil rubbings. On that of 971 H. the last letter of تاندة is wanting and on that of 973 H. the name ends at [ر] پو, the remainder not coming on the coin.

No. 3. Āgra. D. 977 H. W. 175. S. 1·1.

Obverse.

In square area with loop at corners,

اکبر بادشاه غازي

محمد

جلال الدين

Date reads from outside, and also the margins :—

Left السلطان الاعظم

الله

Upper خلد تعالى ملكه

Right و سلطنه دارا

Lower لخلافه آگره

ضرب

Reverse.

Kalima in a quadrilateral each side having 3 curves, and a loop at the corners.

Mint mark L.M.C. No. 32 in right margin.

Margins read from outside.

Rupees of the Āgra mint of Akbar are uncommon, with the mint name clear. This one assists in the marginal readings of rupees of this year. It should be noted that the ا and ل of ال before خلافه occur in different margins. The coin itself shows this separation more distinctly than the plate does.

No. 4. Āgra. D. 982 H. W. 173. S. 1·075.

This follows the type of rupees of Āhmadābād (B.M.C., No. 105) from which, however, there are two on three distinguishing points : (1) the year reads from *outside* ; (2) دارالخلافه instead of دارالسلطانه ; and (3) the mint mark, on this specimen almost obliterated by a shroff mark, is No. 3 in L.M.C., but without the hook and dot. It lies in the curve of د of محمد on the kalima side. Margins are as on Plate ii, 3, and read from outside.

From the find 2 rupees of 981, 4 of 982, and 1 of 984 H. of this type were sent to Museums.

No. 5. Āgra. D. 984 H. W. 174·5. S. 1·0.

Obverse.

In a square with loop at corners, legend as on pl. ii, 3, but 984 parallel with ج of جلال الدين

Reverse.

In a square with curve at middle of each side and loop at corners, the kalima, and mint

The upper and left margins read from inside, and the right and lower from outside thus :—

Upper خلد الله

Left تعالى ملكه

Right ضرب دار

Lower الخلافه اگره

mark L.M.C. No. 32 in د of محمد. Margins as on pl. ii, 3.

The margins are particularly good. There were found 1 of 983, and 2 of 984 H. of this type.

No. 6. Ḥiṣār-i-Fīrūza. D. 966 H. W. 174. S. ·975,

Obverse.

In a square with curve at middle of each side, but no loop at corners,

اكبر باد

محمد شاه غازي

٩٦٦

جلال الدين

Date parallel with and over ين , and mint mark I.M.C. (New), No. 61, (but erect, and without arrow below,) over ج of جلال الدين Margins read from outside thus :—

Right المكرم

Lower ضرب حصار فيـ[ر]و[زه

Reverse.

Kalima in circle and margins illegible.

Abú-l-Faẓl does not note the silver coinage of this mint, but several rupees of Akbar are now known. The find contained two; one without any letters of the name of the mint, with date 967 H.

No. 7. Nahrwāla Pattan. D. 984 H. W. 174.

S. 1·05.

Obverse.

Type, legends, and date as on rupees of Āhmadābād (B.M.C., No. 105.).

Reverse.

As on B.M.C., No. 105.

Margins :—

Left السلطان الاعظم

Right و سلطانه ضرب

Lower ب نهر واله پتن

Āhmadābād issued rupees of this type from 981 to 986 H. the dates reading from *inside*. The Āhmadābād rupee of 981 H., apparently the only one known of this year and now in Lucknow, is from this find. On it the year is reversed, ۱۸۹ for ۹۸۱.

The stroke to the right of نهر واله I take to be the tail of ب of ضرب making the name appear to read Anhalwāla, a form of the name which does occur. We had before (Pl. ii, 3.) a parallel instance of the division of the letters of a word in this position. The find contained 3 specimens, all of 984 H. from the Nahrwāla mint. The obverses of two of them are shown.

Anhalpūr or Anhalwāra was founded about 74 A.D., by Ban Rāj of the Chowra (Chāuḍā) tribe and by degrees the name became corrupted to Nahrwāra or Nahrwāla (Forbes, *Rās Mālā*, 1878, p 29). Nahrwāla is the form it takes in the time of Akbar. In the *Ṭabaqāt-i-Akbarī* (Elliot, *History*, v. pp. 196, 432) we find mention of "Nahrwāla Patan" and "Nahrwāla, better known as Pattan." The *Akbarnāma* (Beveridge, ii, p. 200) speaks of "Pattan which is the nearest city of Gujrat and used formerly to be called Nahrwāla."

The *Ā'īn-i-Akbarī* (Thomas, *Chronicles*, p. 428) mentions پتّن, evidently Nahrwāla, as one of Akbar's mints for *copper*, but none of this metal are known. The rupees now noted are the first found. The position of Nahrwāla is indicated on maps by Patan, in lat. 23° 51′ 30″ N., long. 72° 10′ 30″ E.

Plate XVI.

No. 1. Elichpūr. D. Nil—Bahman. W. 175. S. ·75.

Obverse.

الله

اکبـــر

جل جلا له

Reverse.

ما]ه بهمن الهی

دارا] لضرب ایلچپور

The letter preceding ضرب appears like the ل in the mint name, and is probably the ل of دارا لضرب. No other specimen seems to be known.

No. 2. Gaẓraula, or Gadraula. D. 967 H. W. 175. S. 1·0.

Legends in a square with a loop at corners :—

Obverse.

اکبر بادشاہ غازي

صد محمد

جلال الدین

Date 967 vertically above ج of جلال الدین reads from inside. Right and left margins read from inside and lower from outside :—

Right السلطان

Left خلد الله] تعالے ملکه

Lower ضرب گذرولہ

Upper Wanting.

Reverse.

Kalima, with L.M.C. mint mark No. 22, in left lower corner.

Margins, from inside :—

Upper بصدق ابي بکر

Left بعدل

Right Traces.

In the mint name the و is joined to ل. This occurs on some rupees of Akbar, *e.g.*, in رسول.

One rupee of this mint was found. I do not know the position of Gaẓraula, if that be the correct reading, unless it is the present Gajraula, lat. 28° 50′ 45″, long. 78° 16′ 48″, in the Morādābād District, U.P. Villagers often pronounce ز, غ, and ذ as ج; for instance they say گجرگاہ for گدرگاہ, and گجري for گذري. Gujrāt is often written Guzrāt.

The inhabitants of Gajraula state that their village was founded by Suraj Dhaj, one of Akbar's officers. They have shown me documents, the earliest dated 1137 H., in which Gajraula is spelt with *j*. The name of the mint on the coin can be read Gadraula. If the early inhabitants of Gadraula were of the Yūsufzī tribe the *d* may have been pronounced or changed to *j*: a subdivision of the Yūsufzīs named Khwājozī or Khwādozī are descended from one Khwājo or Khwādo (see Raverty, *Notes on Afghānistān*, p. 208).

No. 3. Bālāpūr. D. 48 Ilahi-Di. W. 176. S. ·07.

Obverse.

As on pl. iii, 1.

Reverse.

دی ۴۸ الٰہی

بالا پور

In the plate 48 looks like 45 Dı. One found.

JAHĀNGĪR.

No. 4. Āgra. D. 1020 H., 6. Shahrīwar.
W. 174·5. S. ·85.

Obverse.

شاه اکبـــر شاه
نگیـــــــــــر
نور الدین جهانگیر

Reverse.

ماه شهریور الهی
٦
آگره ســـنه
١٠٢٠
ضـــرب

The ornamentation of the borders differs from other square rupees of this year given in catalogues. One found.

No. 5. Bairātā. D. 1014 H. W. 176. S. ·75.

Obverse.

نورالدین
١٠١٤
محمد
بادشاه
جهانگیر بیراته

Reverse.

Kalima.

A bird is perched, to *right*, on the ی of جهانگیر. The mint name begins to the left of the bird. There was another specimen, dated 1015 H., with bird to *left* over the نگیر of Jahāngīr's name, also I think of this mint. The name of the mint could not be read with certainty, on the latter coin.

No. 6. Jālnapur. D. Nil. W. 176. S. ·75.

Obverse.

جهانگیر باد[شاه]
محمد
نور الدین

Reverse.

Kalima in 3 lines, below which is,
ضرب جالد[ه] پور

There were 9 like that figured; and one with جالنه above and پور below الله dated in 1015 H. None show distinctly all the letter before پور.

[On the Āhmadnagar rupees of Jahāngīr found of the same type, 4 had نگر above and احمد below الله; 1 had نگر below الله and احمد below نگر; 2 had احمد below و of رسول, without a

trace of نگر (I.M.C. (Wright) No. 642) ; and 3 were from a die with احمد [نگر] apparently in one line, as on pl. iii, 6. None had dates or regnal years.]

The *Akburnāma* mentions Jālnapur in connection with Āhmadnagar in the 46th year of the reign (Elliot, *History*, vi, p. 102). It is the same as Jālnā due east of Aurangabad, *History*, vii, p. 11, note). The distance is 39 miles. Old Jālnā city is in ruins. The mint name was first read and the location of the mint identified by Mr. Nelson Wright. (*Cp.* Num. Supp. III, art 24.)

Shāh 'Alām II.

No. 7. Bālānagar-Gaḍhā. Lat. 23° 10′ N., Long. 79° 56′ 30″ E. D. 1207 H.—33. W. 170. S. ·8.

Obverse.

۱۲۰۷

الہ حامی دین محمد

ضـــــــــــــــــل

شاہ عالم بادشـــاہ

ســـــــــــــــکہ

زد بر ہفت کشور

Reverse.

مانوس

میمنـــت

۳۳

سنـــہ جلوس

ضـــرب

بالا نگـــر گدھا

Over 60 rupees of Shāh 'Alam II from the Bālānagar-Gaḍhā mint were recently found in Sāgar city, C.P., of all regnal years from 26 to 28. The mint is seldom legible. On those of the 26th, and up to and including the 32nd year the legends on both sides correspond, except the mint name, to B.M.C., No. 1170 (a gold coin of Āhmadnagar—Farrukhābād). In the hoard rupees of the 26th year (1199) and 29th year (1202) only of this type had the Hijrī years in full. From the 33rd to the 38th year included the type is shown in Pl iii, 7, a rupee from this find. The rupees of the 33rd year only of the latter type had the Hijrī year perfect.

I have enquired at Jabalpūr and Sāgar and have been unable to hear of a Bālānagar-Gaḍhā. This may for a time have been a name of Garhā, or Gaḍhā, now an unimportant town close to the west side of Jabalpūr on the road to the Marble Rocks.

I gather from Prinsep's *Useful Tables* that the Bālānagar-Gaḍhā rupees formed the class popularly known under the name of Bālāsāhī, so called (p. 28) from Bālājī Pandit, the officer who first issued them. Prinsep (p. 53) refers to the Bālāsāhī as the "Old coinage of Ságar, current in Gurrah and Bundelkhand," and tells us (p. 29) that, "The Ságar mint was set up in 1779, by the Peshwá's officer at Garrah Mandlah, and coined about seventeen lákhs of Bálásáhí rupees per annum."

Bālānagar, thus, may have received its name from Bālājī Pandit, who probably resided in Gaḍhā, in early times a "large city" which with the village of Kantaka or Katanga, 20 miles to the north, give its name to the immense territory called "Garha," or "Garha Katanka" ("Gaḍha-Katanga") mentioned in the reign of Akbar (Elliot, *History*, pp. 169, 288; Beveridge, *Akbarnāma*, ii, p. 323) and occasionally afterwards.

"Mandlah" mentioned above lies on the Narbadā river about 50 miles to the south-east of Jabalpūr. The Gond Rājas of Gaḍhā Mandala had their capital for some time at Gaḍhā.

The Gaḍhā mint was in full operation when Mr. Daniel Leckie passed through the place in 1790. (Imperial Gazetteer, 1885, v, p. 12.)

No. 8. Ravishnagar-Sāgar. D. Nil—33.

W. 170. S. 8.

Obverse.	*Reverse.*
الله محمد شاه عالم باد	مانوس
شـــــــــــــاه	میمنت
سایه فضـــل حامی دین	۳۳
ســـــــــــــکه	سنـــه جلوس
زد بر هفت کشور	ضـــرب
	روش نگر ساگر

This rupee, with "Sagur" below it, is given by Prinsep, *Useful Tables*, pl. xlv, 9, but the name of the mint on his coin is illegible. He states (p. 66) that, "The trident, star, and flag of Siva are its distinguishing marks"—of the "Ságar" rupee—and there refers to the coin of the 51st year in his plate.

The Sāgar hoard just mentioned furnished rupees of every year from 25 to 39 of the type shown in pl. iii, 8, and in Prinsep, but none had Hijirī dates. Over 150 were found. I believe I have seen three or four with Hijirī dates in the thirties over دین.

The Deputy Commissioner of Sāgar has been kind enough to inform me that the older generation assert that Sāgar at one time used to be called Ravishnagar, but they have no evidence or records in support of their statement.

According to Prinsep the mint in Sāgar city was established in 1782 (p. 59), that is in 1197 H., the 24th or 25th year of Shāh 'Alam, and all the old coins of Sāgar and Gaḍha were rapidly disappearing from circulation (p. 29) when the new Sāgar mint erected in 1824 began to issue rupees bearing the mint name Farrukhābād, with upright milling (pp. 2, 3).

In J.A.S.B. 1897, pl. xxxiii, 64, Dr. Hoernle has figured

one of the 44th year, with illegible mint-name, and (p. 271) has assigned it, for some reason not evident, to the native state of Kõc.

W. Vost.

66. On the Bījāpūr rupee of Kām Bakhsh.

In a letter written a short while ago I was lamenting the scarcity nowadays of rare coins in the Ahmadābād bazar. After posting that letter, I went straight to the bazar, and the very first coin to be put into my hand was a Bījāpūr rupee of Kāmbakhsh !

The rupee is of the same type as No. 853 in the British Museum Catalogue, but earlier by a year, and happily it contains that part of the obverse legend which is wanting in the specimen in the British Museum. Right at the top, above the words کام بخش, stands its every letter beautifully distinct, the *laqab* دین پناہ "the Asylum of the Faith."

This addition to the legend thus confirms the statement expressly made by Khāfī Khān in his Muntakhabu-l-Lubāb :—

"The Prince (Kām Bakhsh) then assumed the throne. He was mentioned in the Khuṭba under the title of Dīn Panāh, and coins also were issued with this title." Dowson's Elliot, vii, 390.

Further the couplet on this rupee proves to be precisely the couplet that Mr. Rodgers "built up," and subsequently published in the J.A.S.B. (vol. lvii, part 1, No. 1—1888), namely,

در دکن زد سکه برخورشید و ماه

بادشـــاه کام بخـــش دین پنـــاه

'The Emperor Kām Bakhsh, the Asylum of the Faith, put his stamp on the sun and moon in the Dekkan.'

G. P. Taylor.

67. Was there a Ẓafarābād rupee of Shāh 'Ālam I ?

A few days ago a money-changer here called to show me a few coins. Amongst them I was delighted to find a duplicate of the "Ẓafarābād" rupee of Shāh 'Ālam I, a rupee that Mr. Rodgers in his Lāhor Museum Catalogue (page 197, No. 3) has termed "Unique." In that Catalogue it is described as follows :—

Obverse.	*Reverse.*
غازي	مانوس
شـــــاه	ظفـــــر
عالم باد	احد
شـــــاه	سنه جلوس
سكه ۱۱۱۹	ضرب
	۱۱

Ẓafar[ābād], 1st year,
1119 H.

On the specimen now in my possession the arrangement of the Reverse legend differs slightly from the above, inasmuch as the سنه احد stands not to the right but to the left of جلوس, also in the lowest line no trace is to be seen of the two 'Alifs. But in all other respects the two specimens are precisely alike.

From Mr. Rodgers's attribution of this coin to the Ẓafarābād mint, it is clear that he read the reverse legend thus:—

سنه احد جلوس مأنوس ضرب ظفر آباد

Now the combination of merely the two words جلوس مانوس is, so far as I can learn, otherwise unknown, and it is, moreover, a combination quite meaningless. For these reasons one may well doubt the correctness of the above reading of the legend. I venture, accordingly, to submit that the constituent words should be read just as they are arranged on the coin itself. We shall then arrive at a legend hitherto unsuspected indeed, but perfectly intelligible, to wit,

سنه احد جلوس ظفر مأنوس ضرب

struck at.....the year 1 of the accession (reign) associated with victory. The lowest line is thus assumed to contain the name, as yet unknown, of the mint: and it was, of course, just the lowest line of the reverse that in the large majority of the later Mughal coins was reserved for the mint-name.

GEO. P. TAYLOR.

Aḥmadābād; 20-1-1909.

68. THE MUGHAL MINT OF GOKULGARH.

The ruined fort of Gokulgaṛh is situated two miles to the north of Rewárí, a fairly important junction on the Rájputáná-Málwá Railway in the Gurgāon District of the South-East Punjab.

The town of Rewárí itself is of great antiquity. Tradition assigns its original foundation to Rájá Karm Pál son of

Chattar Sál, and nephew of the celebrated Prithvi Rájá. The present town is said to have been built about the year 1000 A.D. by Rájá Reo or Ráwat, who called it after the name of his daughter Rewāti. In Mughal times although Rewári was the headquarters of a Sarkár or district of the Empire, its Rájás appear to have enjoyed a large measure of independence, paying tribute but coining their own money. They built the fort of Gokulgaṛh, some of the bastions of which still remain as indications of the former strength and size of the place.

The mint of Gokulgaṛh is included amongst those of the silver coins of Shāh'Alam II only, in Mr. Burn's 'The Mints of the Mughal Emperors.' It appears to have been published for the first time in 'Some Novelties in Mughal coins' by Major Vost and Mr. White King—see Numismatic Chronicle, 1896, p. 155. The coin itself is No. 4133 in the Third Part of the White King Catalogue.

In the Numismatic Supplement No. VIII contained in the Journal of the Asiatic Society of Bengal for August, 1907, Dr. Taylor has attributed a coin of Kám Bakhsh to Gokulgaṛh, but adds that it cannot be the Gokul near Muttra. It also cannot be identified with the town which is the subject of this note.

Mr. Nelson Wright's Introduction to vol. iii of the Catalogue of the Coins in the Indian Museum, Calcutta, contains a brief notice of the mint Gokulgaṛh. He there notes that it does not occur as a Mughal mint till the reign of Shāh'Alam II. In A.H. 1202 the latter besieged and captured the town, but rupees of earlier dates are known.

In the Dehli bazar I came across a find of some forty Gokulgaṛh rupees of Shāh 'Alam II, which had been sent from Rewári. Unfortunately there were two coins only which exhibited the entire name. and it was by their aid that I was able to read the name of the mint on the remainder. This find also enabled me to read the name Gokulgaṛh on two or three rupees of Shāh 'Alam II, which formed part of a large consignment of Treasure Trove from the Gurgáon District. These coins are said to have circulated in the bazars of Farrukhnagar, a small Gurgáon town, till the time of the Mutiny.

A rupee of Shāh 'Alam II, Mint Gokulgaṛh.

Obverse.	*Reverse.*
الله محمـــد شاه عالم باد	گوکل گڑه
شـــاه ۱۱۸۸	ضرب
سایه فضل حامي دین	میمنت مانوس
بر هفت کشور	جلوس ۱۶

R. B. Whitehead.

69. Old Coins in the Bahāwalpūr State Toshakhānā.

In December, 1908, I was deputed to examine the old coins in the Bahāwalpūr State Toshakhānā.

Till recent years the State Treasure was kept intact in the desert Fort of Derāwar, but has been gradually dispersed after its removal to the present capital of the State. In round numbers there are now four lakhs of silver coins, and half a lakh of gold. Fortunately I found that the coins had been roughly classified, and it was unnecessary to open most of the bags as they only contained coins of Bahāwalpūr State, and gold and silver issues of the Durrāni Kings Maḥmūd and Shāh Shujā, minted at Bahāwalpūr. Next in number came miscellaneous coins of the Durrāni Kings. In comparison with these the Mughal coins formed only a residue of the whole, but from a numismatic point of view were of great importance, because there were at least six thousand Mughal gold mohurs. The Mughal rupees were scattered at random throughout the bags of silver and often only some half dozen would turn up out of a bag of a thousand, but the results I think have justified the labour expended. The time at my disposal, less than three weeks, was altogether inadequate for a thorough examination of so great a number of coins, and many things worthy of preservation must have escaped my notice. For instance it would have been interesting to have compiled lists of dates, but I was unable to do this. Any dates mentioned are taken from coins selected at random.

I confined my chief attention to a search for new or rare Mughal coins, and for fine specimens of known issues.

Gold Coins.

Mughal. Of the whole mass of gold coins, the oldest was a solitary mohur of Sher Shāh Sūri. I found a few gold coins of Akbar, of Sháh Jahán, and of Sháh 'Álam II, but all the remaining Mughal issues were of the emperors from Aurangzeb to 'Alamgir II. The commonest mohur mint was Akbarábád. There must have been at least two hundred Akbarābād coins of Aurangzeb, fifty of Jahāndār Shāh, and sixty of Muḥammad Shāh. Many coins of West Punjab mints such as Dera and Multán were found, but these did not predominate.

In Mr. Burn's, 'The Mints of the Mughal Emperors', published in Part I of Volume LXXIII of the Journal, Asiatic Society of Bengal, a paper to which I have made frequent reference, twenty-four mints of the gold coins of Aurangzeb are shown. In the Bahāwalpūr Treasure mohurs of some thirty-four mints were found. As it would appear that mohurs of other emperors, in addition to Aurangzeb, have not been pre-

viously published, I have appended to this Note lists of the mints of the various emperors represented, and short references to the more interesting coins.

I came across two mohurs of Farrukh Siyar of apparently a new mint, Sīkākul. Through the kindness of Mr. Burn I have been enabled to identify this place with Chicacole or Srīkākulam, a town in Ganjām District, Madras Presidency, situated four miles from the sea on the Langūliyā river, and on the Grand Trunk Road. The town was the capital of the Mughal *sarkār* of Chicacole.

In his Introduction to Volume III of the new Indian Museum Catalogue, Mr. Nelson Wright says—'Apparently no gold coins are known of Aurangzeb from the Lahor mint.' Some fifteen of various dates were found at Bahāwalpūr. In view of the remarks made in this Introduction, which has been of great assistance to me, the following mohurs are of especial interest.

Emperor.	Mint.
Shāh Jahān.	Lakhnau.
'Ālamgīr II.	Multān.
Muḥammad.	Aurangābād.

Another apparently new mint is Derajāt. What may be a new type of mohur of Shāh 'Ālam Bahādur I is of interest, as are half mohurs of Muḥammad Shāh minted at Sind. The reverse side of these exhibits an unusual inscription. Fuller references to these and other matters interesting to the numismatist are made later in this Note.

Durráni. The lists of selected Durrāni coins do not call for comment. One mohur of Aḥmad Shāh, bearing the Hijrā date on the reverse side, appears to be of an Army Mint—see Army Mint of the Shahs of Persia on page 169 of Dr. Codrington's 'Musalman Numismatics.'

Miscellaneous. Miscellaneous gold coins included many mohurs of Nādir Shāh and the Qājār Shāhs of Persia. There were some thousands of ducats.

Shāh Jahān. There are only eleven mohurs of Shāh Jahān, but they include 'square area' type coins of Akbarnagar, Bhīlsa, Kābul, Kashmīr and Lāhor mints, none of which are in Mr. Burn's Tables. The Kābul mohur is dated A.H. 1048 (*jalus* 11), and that of Lakhnau is dated 1051 (*jalus* 15). Neither appears to have been published before—see Mr. Nelson Wright's Introduction to Volume III of the Indian Museum Catalogue.

Aurangzeb. The gold coins of Aurangzeb are of at least thirty-four different mints. Those not contained in Mr. Burn's Tables are Ilahābād, Aḥmadābād, Ṭatta, Jahāngīrnagar, Dāru-l-Jihād Haidarābād, Ẓafarābād, 'Ālamgīrpūr, Katak, Dāru-s-Salṭanat Lāhor, Murshidābād,

and Aḥsanābād. In the earlier examples of the Aurangābād mint, the name occurs at the top of the coin (latest date *jalus* 19). Later it was changed to the bottom (earliest date 1090, *jalus* 22). Similarly in a mohur of Aḥmadnagar dated *jalus* 14, the name of the mint is at the top of the coin. Later specimens exhibit the name at the bottom (earliest date 1098). The name ʻĀlamgīrpur also occurs in both places. Khanbāyat is at the top of a coin dated regnal year one. When the spelling is changed to Kanbāyat the mint occurs at the bottom of the coin (earliest date 1082, *jalus* 14). The mohurs of Dāru-ẕ-Ẕafr Bījāpūr exhibit two distinct styles.

Out of at least two hundred mohurs of Mustaqirru-l-Khiláfat Akbarābād, one only had بدر منیر in the couplet (date 1097), the rest having مهر منیر (earliest date 1099). Coins exhibiting both versions of the couplet were found of Sūrat, of Kābul, and of Dāru-l-Mulk Kābul. There are mohurs of both Gulbarga and Aḥsanābād. The gold coins of Dāru-s-Saltanat Lahore appear to be new. At least fifteen were found. The selected specimens range from 1097 to 1118, and are of the usual type, the name of the mint coming at the top. The three selected mohurs of Murshidābād are all of 49 *jalus* date. There are gold coins of Ujjain (1105 A.H.), and of Dāru-l-Fatḥ Ujjain (1112). The 'square areas' type of Jahāngīrnagar mentioned by Mr. Nelson Wright (I.M.C.) is represented by three specimens of *jalus* years 14 and 15.

Shah ʻĀlam Bahādur I.

There are three mohurs apparently of Shāh ʻĀlam Bahādur I bearing the following inscription :—

Obverse.

عالم گير ثاني

۱۱۱۹

قراني بهادر

صاحب

.....

(Probably مبارک سکه)

Reverse.

جلوس مانوس

ميمنت

مستقر الخلافه

سنه احد

ضرب

اکبر آباد

They are coins of Ṣāḥib Qirān Bahādur ʻĀlamgīr Sāni, struck at Mustaqirru-l-Khilāfat, Akbarābād, in 1119 (*jalus* one), and resemble silver coin No. 3, on p. 220 of C. J. Rodgers' Catalogue of 'The Coins of the Moghal Emperors of India' in the Lahore Museum. It would appear that this rupee was erroneously attributed by Mr. Rodgers to ʻĀlamgír II, and is a coin of Shāh ʻĀlam Bahādur I.

On a mohur of Mustaqirru-l-Khilāfat, Akbarābād, the name is at the bottom of the coin, dated 1119, *jalus* 1. The mint of

another coin, dated 1119, *jalus* 2, is Mustaqirru-l-Khiláfat only, at the top of the coin. On other mohurs of *jalus* dates 2, 3 and 4, Akbarābād is called Mustaqirru-l-Mulk.

Gold coins of Dāru-l-Fatḥ, Ujjain, display two reverses. One is :—

دار الفتح
میمنت
جاوس مانوس
ضرب
اوجین ۲

The other is :—

مانوس
میمنت
۲
جلوس سنه
دار الفتـــح اوجین

Similarly of Farkhunda Bunyád Ḥaidarábád :—

(1).

جلوس
میمنت
مانوس فرخنده بنیاد
ـــــــــــــ
حیدراباد

(2).

جلوس
میمنت
مانوس حیدر اباد
ـــــــــــــ
فرخنده (بنیاد)

There are mohurs of Etāwa, Tatta, Farkhunda Bunyād, Ḥaidarābād, and Muḥammadābād mints, which are not represented in Mr. Burn's Tables.

Gold coins of Etāwa, Mustaqirru-l-Mulk Akbarābād ; Dāru-s-Sarūr, Burhānpūr, Khujista Bunyād, and Dáru-l-Khiláfat Shāhjahánábád, were found. There are two types of the Sháhjahánábád coins.

ahāndār Shāh,

The mints of the mohurs of Farrukh Siyar are Etáwa; Dáru-l-Khair, Ajmer, Akbarábád; Dáru-l-Fatḥ, Ujjain, Arkát, Ilahábád ; Dáru-s-

Farrukh Siyar.

Sarúr, Burhánpúr, Pesháwar, Khujista Bunyád, Sahrind, Súrat, Dáru-l-Khiláfat Sháhjahánábád, 'Azímábád, Farkhunda Bunyád, Kashmír; Dáru-s-Saltanat, Láhor, Murshidábád, Mú'azzimábád, Multán. and Síkákul. Of these Dáru-l-Khair Ajmer, Akbarábád, Dáru-l-Fath Ujjain, Arkát, Ilahábád, Pesháwar, Sahrind, Súrat. 'Azímábád, Farkhunda Bunyád. Kashmír, Mu'azzimábád, and Síkákul are not in Mr. Burn's Tables.

For the first five regnal years Akbarábád is called Mustaqirru-l-Mulk. In *jalús* year 6 the epithet is changed to Mustaqirru-l-Khiláfat. As the reverse of the Ilahábád mohur is peculiar, I figure it here :—

مبارك

ـــد

۷

سنه جلوس

ـــــــد

الله اباد

The Arkát coin is dated *jalus* 5. On 'Azímábád coins of *jalus* year 1, the name of the mint is not attended by the usual epithet Mustaqirru-l-Mulk, which only appears on mohurs of 1129, *jalus* 5.

The mohurs of Farkhunda Bunyád (Haidarábád), Kashmír, and Mu'azzimábád appear to be new.

The name Síkákul, possibly an entirely fresh mint, appears distinctly on a mohur of this reign, dated 1124.

Rafí'u d-Darját.

The gold coin mints represented are Pesháwar, Khujista Bunyád, Dáru-l-Khiláfat Sháhjahánábad, Dáru-l-Mulk Kábul, and Dár-us-Saltanat, Lahore. The unpublished mints appear to be Pesháwar, Khujista Bunyád, and Dáru-s-Saltanat, Lahor.

All the mohurs are of the usual couplet type. There are two mohurs of Dáru-l-Mulk, Kábul, companions to the unique mohur in the Láhor Museum.

Sháh Jahán II.

Mohurs of Sháh Jahán II of Arkát, Khujista Bunyád, Súrat, Dáru-l-Khiláfat Sháhjahánábad, Dáru-s-Saltanat, Láhor, and Mustaqirru-l-Khiláfat Akbáràbád mints were found.

The Súrat coin is dateless and may be attributable to Sháh Jahán III. This remark also applies to the mohur of Mustaqirru-l-Khiláfat Akbarábád.

Muhammad Sháh.

The gold coin mints of Muhammad Sháh are Etáwa, Ahmadábád, Akhtarnagar Awadh, Islámábád; Mustaqirru-l-Khiláfat Akbarábád, Dáru-l-Fath, Ujjain, Aurangábád, Dáru-s-Sarúr, Burhánpúr, Tatta, Siwai Jaipur, Khujista Bunyád, Súrat, Sahrind, Sháhá-

bád Qanauj, Dáru-l-Khiláfat Sháhjahánábád, Dáru-l-Mulk, Kábul, Katak, Kora, Gwaliar, Dáru-s-Salṭanat, Láhor, Muḥammadábád, Murshidábád, Mu'azzimábád, and Multán.

The mints not included in Mr. Burn's Tables are, Aḥmadábád, Islámábád, Aurangábád, Dáru-s-Sarúr, Burhanpúr, Tatta, Siwáí Jaipúr, Sahrind, Sháhábád Qanauj; Dáru-l-Mulk Kábul, Katak, Kora, Gwaliar, Mu'azzimábád, and Multán.

The date of the later of the two mohurs of Dáru-l-Mulk Kábul is *jalus* 10.

The name Mustaqirru-l-Khiláfat Akbarábád occurs both at the top and at the bottom of the disc. Out of a large number of gold coins of this mint I discovered two which presented the Sháhjahánábád style of obverse. In these cases the name of the mint was at the top of the coin.

The Aurangábád coin appears to be unique, as it still preserves the name in its old form. This coin is also remarkable as the obverse is in the Sháhjahánábád style. The name of the mint comes at the top of the coin.

Aḥmad Shah Bahádur.

Mohurs of the following mints were found:—Etáwa, Mustaqirru-l-Khiláfat Akbarábád, Siwáí Jaipúr, Deraját, Dera or Deraját, Sahrind, Dáru-l-Khiláfat Sháhjahánábád, Farrukhábád, Dáru-s-Salṭanat, Láhor, Muḥammadábád, and Multán. Those not included in Mr. Burn's Tables are Etáwa, Siwáí Jaipúr, Dera, Deraját, Sahrind, Farrukhábád, Dáru-s-Salṭanat, Láhor, and Multán. The name Deraját distinctly appears on one coin.

'Alamgir II.

The gold coin mints are Aḥmadnagar Farrukhábád, Islámábád, Mustaqirru-l-Khiláfat Akbarábád, Siwáí Jaipúr, Sahrind; Dáru-l-Khiláfat Sháhjahánábád, Dáru-s-Salṭanat, Láhor Dáru-l-Amán Multán, Mahindrápur and Najíbábád. Of these mints Aḥmadnagar Farrukhábád, Islámábád Mustaqirru-l-Khiláfat Akbarábád, Siwáí Jaipúr, Sahrind, Dáru-l-Amán Multán, and Mahindrápur are not represented in Mr. Burn's Tables.

The earliest date of the Aḥmadnagar Farrukkhábád coins is 1170 (*jalus* 3).

It is unfortunate that the Sahrind mohur is dateless. There are four varieties of the Sháhjahánábád mohur.

(1) The obverse of the usual type:—

عالم گیـــر

ـــــــــے

بادشاہ غاز

کـــــــ

سکہ صبار

(2) The couplet obverse as on No. 4092 in Part III of the White King Catalogue. In addition to the ordinary type of reverse, there is something in an additional line at the top.

(3) The obverse is in three lines as follows :—

محمد خلد الله ملکه و سلطنته

———————

عزیز الدین عالم گیر بادشاه غاز

———————

سکه مبار ابو العدل

Ordinary type of reverse.

(4) Obverse in four lines is as follows :—

خلد الله ملکه و سلطنته

محمـــــــــــــد

۱۱۶۹

عالم گیر بادشاه غاز

———————

ابو العدل عزیز الدین

کـــــــــــــــــ

سکه مبار

Reverse.

جهان اباد

شـــــــاه

۲

دارالخلافه سنه

ـــــــــــــ

جلوس میمنت مانوس ضر

In the introduction to volume iii of the Catalogue of Coins in the Indiam Museum, Calcutta, Mr. Nelson Wright says that the latest Mughal issues from Multán mint are of Aḥmad Sháh, and that after this reign Multán became a mint town of the Durráni dynasty. Amongst the Bahawalpúr treasure I came across one mohur and several rupees of 'Alamgir II issued from Dáru-l-Amán Multán mint. They are of the true imperial type, but have a mint mark on the reverse. I shall have something more to say about this in my note on the silver coins.

Obverse.

عالم گیر
۱۱۷۳
ـــــ د ـــــ
بادشاه غاز
ـــــ ک ـــــ
سکه مبار

Reverse.

دار الامان
جلوس سنه ۷
ضرب
مُلتان

The mohurs of Sháh Jahán III are of Aḥmadnagar Farrukhábád, Islámábád, Dáru-l-Khiláfat Sháhjahánábád, and Mahindrápúr mints.

Sháh Jahan III.

The Islámábád coins have no hijri dates, and may be issues of Sháh Jahán II.

The mints of Sháh 'Alam II represented are Mustaqirru-l-Khiláfat Akbarábád, Siwáí Jaipúr, Mahindrápúr, and Najíbábád.

Sháh 'Alam II.

The miscellaneous Mughal gold coins contain duplicates of those already reviewed, half mohurs of Muḥammad Sháh of Sháhjahánábád mint, and interesting half mohurs of the same emperor, apparently issued from mint Sind. There is the usual Sháhjahánábád type of obverse, but the reverse is remarkable:—

Miscellaneous Mughal gold coins.

الزمان
ـــــ حد ـــــ
الامیر عما ۱۲
ـــــ ر ـــــ
ضرب سند

Alamír Ṣáḥib-uz-Zamán Ẓarb Sind (*jalus*) 12.

Mr. Burn has kindly given me his opinion on the uncertain mints of three Mughal mohurs. His suggestions are:—

Uncertain Mughal mints.

Emperor.	*Suggested Mint.*
Aurangzeb.	Elichpúr.
,,	ʻAẓímábád or Ḥáfiẓábád.
Muḥammad.	Kumhársain.

Nádir Sháh.

The gold coins of Nádir Sháh are of mints Bhakkar, Pesháwar, and Dáru-l-Mulk Kábul, and are of the usual type of this emperor's coins struck in India.

Aḥmad Sháh Durráni.

Aḥmad Sháh Durráni's mohurs are of mints Attak, Aḥmadnagar, Farrukẖábád, Bhakkar, Pesháwar, Ashraf-ul-Bilád Aḥmad Sẖáhí (Qandahár), Dera, Deraját, Sahrind, Dáru-l-Khilafat Sẖáhjahánábád. Dáru-s-Salṭanat Kábul, Dáru-l-Mulk Kábul, Dáru-s-Salṭanat Láhor, Mashhad Muqaddas, Dáru-l-Amán Multán, Multán, Najíbábád and Hirát.

Most of the coins are of the type p. 166, 1, of Rodgers' "Catalogue of the Coins in the Láhor Museum," part ii.

One Láhor mohur is of type plate ii, fig. 1, of Rodgers' "The Coins of Aḥmad Sẖáh Abdalli," published in the Journal, Asiatic Society of Bengal, volume liv, part i, 1885. Type plate ii, fig. 6, is represented by gold coins of Bhakkar, Dera, and Dáru-l-Amán Multán.

The only words I can read on the reverse of one gold coin are 'Ẓarb rikáb mubárik,' and 'muḥarram'? The date of this coin is 1173, and is contained on the reverse. Possibly the mint is analogous with 'Ẓarabkẖána rikáb,' or army mint of the Shahs of Persia, mentioned on p. 169 of Dr. Codrington's 'Musalman Numismatics.'

Taimúr Sẖáh Durráni as Niẓám.

The mohurs of Taimúr Sháh Durráni as Niẓám are of mints Dera, Dáru-s-Salṭanat Láhor, Dáru-l-Amán Multán, and Multán.

Taimúr Sẖáh Durráni as King.

The mohurs of Taimúr Sháh Durráni as king are of Ashraf-ul-Bilád Aḥmad Sháhí, Pesháwar, Dera, Dáru-s-Salṭanat Kabul, Mashhad Muqaddas, Dáru-l-Amán Multán, Hirát, and Dáru-s-Salṭanat Hirát.

Zamán Sẖáh Durráni.

The issues of Zamán Sháh Durráni are represented by coins of Ashraf-ul-Bilád Aḥmad Sẖáhí, Dera, Deraját, Pesháwar, Dáru-s-Salṭanat Kábul, Dáru-s-Salṭanat Láhor, and Dáru-l-Amán Multán.

Sẖáh Sẖujá Durráni.

Sẖáh Sẖujá's' gold coins include mohurs and double mohurs of Baháwalpúr and mohurs of Dera, Dáru-s-Salṭanat Kábul, and Dáru-l-Amán Multan.

Maḥmūd Sẖáh Durráni.

Maḥmúd Sháh's coins are double mohurs of Baháwalpúr, of type No. 2861 in part iii of the White King Catalogue.

Rupees : Mughal.

As a general rule rupees of Baháwalpúr mint, whether issues of the later Durráni kings or of the State, had been separated out, and as in the case of the gold coins, formed the great bulk of the four lakhs of silver coins. The remainder consisted of miscellaneous Durráni rupees, with a sprinkling of Mughal and Persian coins. There was one bag of about a thousand, 'square area' type coins of Sháh Jahán. I thought it possible that out of so many rupees of this type, I might come across a coin of Sháh Shujá, Muḥammadí, but was not successful, although I found three or four 'square area' type rupees of Muḥammad Murád Bakhsh of Aḥmadábád and Súrat mints, and several coins of Aurangzeb of this type.

Although the number of Mughal rupees was comparatively small, I found many rare coins, which are detailed below. There is a duplicate of the till now unique Murádábád rupee of Aurangzeb in the Láhor Museum. It bears the same dates.

I came across several rupees of Rafí'u-d-darját of Multán mint of the rare non-couplet type.

'Álamgír Ṣání's coins of Baldat Bikánír and Dáru-l-Amán Multán are worthy of note.

The silver coins may be said to start from Aurangzeb, and to end with 'Álamgír II. Rupees of Aurangzeb and Muḥammad Sháh predominated. The number of Muḥammad Sháh's coins of mints Kora and Akhtarnagar Awadh was remarkable. There were about equal numbers of the rupees of Farrukh Siyar and Sháh 'Álam Bahádur I. I found no *nisárs*, and no rupees of the rare emperors such as A'zam Sháh, Sháh Shujá, Muḥammad Ibráhím, and Bedár Bakht.

Durráni.

There is a great mass of material for a detailed study of Durráni silver coins, of which there must be a lakh in the State Treasury. The most interesting of the selected coins appears to be a solitary rupee of Taimúr Sháh minted at Khujista Bunyád, Ḥaidarábád

Sháh Jahán.

The rupees of Sháh Jahán include 'square areas' type coins of mints Aḥmadábád, Akbarnagar, Burhánpúr, Bhakkar, Bhílsa, Patna, Júnágarh, Jahángírnagar, Daulatábád, Súrat, Qandahár, Kábul, Khanbáyat, Láhor, Lakhnau, and Multán.

The obverse of the Burhánpúr coin has margins as follows:—

Right margin	..	برهانپور
Bottom margin	..	صاحب قران ثاني
Left margin	..	خلد الله ملكه
Top margin	..	شهاب الدين محمد

The left margin inscription is unusual.

One of these coins apparently of Khanbáyat mint is a

curiosity. The obverse was struck from a reversed die, but can be read in a mirror. The reverse is normal.

Coins of miscellaneous types were found of mints Aḥmadábád, Akbarnagar, Jahángírnagar, Láhor, Tatta, Burhánpúr, Patna, Dehlí, Súrat, and Bakkar or Nagar.

The reverse inscription of one type, mint and date illegible, is in three lines. The first and third lines contain the names of the four Imams with their attributes. The second line contains the Kalima.

Murád Bakhsh.

The rupees of Muḥammad Murád Bakhsh are of the usual 'square areas' type, mints Aḥmadábád and Súrat.

Aurangzeb.

Rupees of Aurangzeb were found of the following mints :— Júnágarh, Akbarábád, Dáru-l-Khair Ajmer, Aḥsanābad, Aḥmadábád, Aḥmadnagar, Islámábád, Akbarnagar, Burhánpúr, Bareli, Dáru-ẓ-Ẓafr Bíjápúr, Tatta, Chínápatan, Sahrind, Ẓafarpur, 'Alamgirpúr, Dáru-l-Mulk Kábul, Katak, Kashmír, Kanbáyat, Gulkanda, Lakhnau, Machhlípatan, Murádábád, Multán, Nárnol, Dáru-s-Salṭanat Lāhor, Etáwa, Dáru-l-Khiláfat Sháhjahánábád, Mustaqirru-l-Khiláfat Akbarábád, Súrat, Ẓafarábád, Dáru-l-Fatḥ Ujjain, Ujjain, Dáru-l-Amán Multán, 'Aẓimábád, and Jahángírnagar—thirty-four different mints in all.

The coins are of the usual couplet type with the exception of coins of Júnágarh and Akbarábád, which are of types p. 182, 13 and 14 respectively of Rodgers' "Catalogue of the Mughal Coins in the Lahore Museum."

The most important of these coins appears to be that of Murádábád, which I have mentioned earlier in this note.

Sháh 'Alam Bahadur I.

Sháh 'Álam Bahádur I's silver coins are of mints Etáwa, Arkat, Akbarábád (Mustaqirru-l-Khilafat, and Mustaqirru-l-Mulk), Dáru-s-Sarúr Burhánpúr, Bareli, Pesháwar, Chínápatan, Tatta, Kanbáyat, Dáru-s-Salṭanat Láhor, Multán, Dáru-l-Khiláfat Sháhjahánábád, Lakhnau, Súrat, Khujista Bunyád, Kashmír, and Dáru-l-Mulk Kábul.

In his Introduction to volume iii of the Indian Museum Catalogue, Mr. Nelson Wright says of Arkát—'The mint appears to have been established in the reign of Farrukh Siyar—the earliest known coins being of 1129 (cabinet of Dr. Taylor).' If my reading is correct, the Arkát coin of Sháh 'Álam Bahádur I is new. It is dated 1122 (*jalús* 4).

The rupees of Pesháwar, Multán, Kashmír, and Kábul are rare.

Jahándár Sháh.

Rupees of Jahándár Sháh were found of the following mints :— Etáwa, Mustaqirru-l-Mulk Akbarábád, Dáru-s-Sarúr Burhánpúr, Bareli, Tatta, Súrat, Dáru-s-Salṭanat Láhor, and Dáru-l-Khiláfat Sháhjahánábád.

Farrukh Siyar.

Farrukh Siyar's coins are of Etáwa, Aḥmadábád, Arkát, Akbarábád (Mustaqirru-l-Mulk, and Mustaqirru-l-Khiláfat), Dáru-s-Sarúr Burhánpúr, Bareli, Pesháwar, Tatta, Khujista Bunyád, Súrat, Sahrind, 'Aẓímábád, Mustaqirru-l-Mulk Aẓímábád, Farrukhábád, Kanbáyat, Gwáliar, Murshidábád, Multán, Dáru-l-Khiláfat Sháhjahánábád, Dáru-s-Salṭanat Láhor, Aḥmadábád, and Dáru-l-Khair Ajmer.

The rupees of Pesháwar, Tatta, Kanbáyat, and Ajmer are rare.

Rafi'u-d-darját.

The silver issues of Rafi'u-d-darját are represented by rupees of Dáru-l-Khiláfat Sháhjahánábád, Dáru-s-Salṭanat Láhor, and Multán.

The rupees of Multán are of the rare type without the couplet.

Sháh Jahàn II.

Rupees of Sháh Jahán II of the following mints were found :—Mustaqirru-l-Khiláfat Akbarábád, Dáru-l-Khiláfat Sháhjahánábád, and Dáru-s-Salṭanat Láhor.

Muḥammad Sháh.

The silver mints of Muḥammad Sháh are :—Etáwa, Dáru-l-Khair Ajmer, Aḥmadábád, Akhtarnagar Awadh, Arkát, Islámábád, Ilaháhád, Dáru-s-Sarúr Burhánpúr, Bareli, Siwái Jaipúr, Tatta, Dera, Súrat, Sahrind, Sháhábád Qanauj, Dáru-l-Khiláfat Sháhjahánábád, Aẓímábád, Kashmír, Kora, Kanbáyat, Muḥamma ábád, Gwáliar, Lakhnau, Murshidábád, Multán, Bhakkar, Mustaqir u-l-Khiláfat Akbarábád, Dáru-s-Salṭanat Láhor, Dáru-l-Fatḥ Ujjain, Khujista Bunyád, Pesháwar, and Farkhunda Bunyád Ḥaidarábád.

The coins of Tatta, Lakhnau, Khujista Bunyád, and Farkhunda Bunyád Ḥaidarábád are rare.

If my reading is correct, the coins of Bhakkar of the ordinary type are new.

I came across several coins of Sháhjahánábád mint, not of the usual type of the rupees of this city, but of the ordinary type.

Aḥmad Sháh Bahádur.

Rupees of Aḥmad Sháh Bahádur of mints Etáwa, Dáru-l-Khair Ajmer, Mustaqirru-l-Khiláfat Akbarabád, Dáru-l-Mansúr Jodhpúr, Siwái Jaipúr, Dera, Sahrind, Farrukhábád, Kálpí, Dáru-s-Salṭanat Láhor, Muḥammadábád, Multán, and Dáru-l-Khiláfat Sháhjahánábád were found.

The rupee of Dera appears to be unpublished. It is dated 1161 (*jalus* 1).

'Alamgir II.

The silver coins of 'Alamgír II are of mints Mustaqirru-l-Khiláfat Akbarábád, Islámábád, Baldat Bikánír, Siwái Jaipúr, Dera, Sahrind, Dáru-l-Khiláfat Shahjahánábád, Farrukhábád, Dáru-s-Salṭanat Láhor, Muḥammadábád, Dáru-l-Amán Multán, Mahindrápúr, Najíbábád, and Aḥmadnagar, Farrukhábád.

I came across at least a dozen rupees of the ordinary imperial type without any mint mark, but of poor workmanship, struck apparently at بلدهٔ سعا . This I presumed was the Baldat-i-Safa (?) of Mr. Burn's Tables, and Mr. Rodgers' Catalogue. At last one good specimen exhibited two more letters at the end of the name which was obviously Baldat Bikánír. From the uniform absence of the last two letters on all the other coins, it would appear that they were struck from defective dies. The coins are of *jalús* dates 1 and 2.

One type of Sháhjahánábád rupee has the following obverse in four lines :—

خلد الله ملکه و سلطنته

عالم گیـــر بادشاه غاز

ابو العدل عزیز الدین

سکه صدار

There are also coins of Sháhjahánábád of a couplet type (White King Catalogue, part iii, No. 4092), and of type No. 8 on p. 221 of Rodgers' Catalogue of Mughal coins in the Láhor Museum.

I found one coin which apparently exhibits a new couplet :—

Obverse.

عالم گیر

پناه جهان باد

چو مهر منیر

یافت رونق تابان

Reverse.

.....

دار الخلافه شاه جهان اباد

جلوس میمنت مانوس

۴

سنه

The inscription on the obverse is not complete, but the couplet might be :—

Sikka yáft raunaq tábán chún mihr munír
Az jahán panáh bádsháh Álamgír.

The mint is Dáru-l-Khiláfat Sháhjahánábád, and *jalús* date 4.

I have already noted the find of a mohur of this emperor coined at Dáru-l-Amán Multán in 1173 (*jalús* 7), of the true imperial type, and excellent workmanship, but bearing a mint mark on the reverse. I also came across several rupees with similar inscriptions :—

Obverse.

عالم گیر
۱۱۷۳
ـــــے
بادشاہ غاز
ـــــــا
سکہ مبارک

Reverse.

مانوس
میمنت
جلوس سنہ ۷ دارالامان
ضرب
ملتان

For purposes of comparison I have included with these coins a rupee of Taimúr Sháh Durráni as Nizám, and a Sikh rupee, both of Dáru-l-Amán Multán. The coin of Taimúr Sháh Durráni is of his usual couplet type on the obverse, but the reverse is exactly similar to the above with the same mint mark. It is dated 1173 (*jalús* 2). The Sikh rupee also bears the same mint mark, and is dated 1823, *sambat*, or A.H. 1180. It would be interesting to know who issued coins at Dáru-l-Amán Multán in the name of 'Alamgír Sání in the last year of that emperor's reign

The coin of Dera appears to be new.

Sháh 'Alam II. Sháh 'Alam's rupees are of Aonla, Murádábád, Mahindrápúr, and Najibábád mints.

Muḥammad Akbar II. A solitary coin of Akbar II is of mint Dáru-l-Khiláfat Sháhjahánábád.

Nádir Sháh. Rupees of Nádir Sháh were found of mints Dáru-s-Salṭanat Is ahán, Dáru-s-Salṭanat Tabríz, Mashhad Muqaddas, Shíráz, Deraját, Sind,

Peshâwar, Dâru-l-Mulk Kâbul, Bhakkar, and Dâru-l-Khiláfat Shâhjahánábád.

Aḥmad Sháh Durráni. The rupees of Aḥmad Sháh Durráni are of the following types and mints :—

Type of coin No. 2 on page 167 of part ii of Rodgers' Láhor Museum Catalogue :—Multán, Dâru-s-Salṭanat Láhor, Mashhad Muqaddas, Sahrind, Peshâwar, Dera (two varieties), Dâru-s-Salṭanat Kâbul, Ashrafu-l-Bilád Aḥmad Shâhi, Dâru-l-Khiláfat Shâhjahánábád, Súrat, Najíbábád, Aonla, Dâru-l-amán Multán.

Type of coin similar to that of Taimúr Sháh on page 171, No. 10 :--Dera, Derajât, Bhakkar, Dâru-l-amán Multán.

Taimúr Sháh Durráni as Nizám. The coins of Taimúr Sháh as Nizám are of :—Bhakkar (two reverses), Sind, Dera, Dâru-s-Salṭanat Láhor, Multán, Dâru-l-amán Multán (two reverses).

Taimúr Sháh Durráni. The coins of Taimúr Sháh as King are of the following types and mints :—

Type of page 171, No. 5 :—

Ashrafu-l-Bilád Aḥmad Sháhí (two reverses), Mashhad Muqaddas, Dâru-s-Salṭanat Kâbul (two reverses), Peshâwar (two reverses), Multán, Dâru-l-amán Multán (two reverses), Derajât, Bhakkar, Dera (two reverses), Hirât, Dâru-s-Salṭanat Hirât, Khujista Bunyád Ḥaidarábád, Attak.

I presume that the Khujista Bunyád Ḥaidarábád is the Ḥaidarábád in Sind. The coin is a single specimen in fine condition.

Type of p. 171, No. 10 :—Bhakkar.

Type of p. 173, 23 :—Bhakkar, Sind.

Zamán Sháh Durráni. Zamán Sháh Durráni's rupees are as follows :—

Type p. 175, 7 :—Dera, Dâru-s-Salṭanat Láhor, Bhakkar, Ashrafu-l-Bilád Aḥmad Sháhí, Dâru-s-Salṭanat Kâbul, Peshâwar, Derajât, Dâru-l-amán Multán.

Type p. 175, 3 :—Peshâwar.

Type as follows (name of mint in circle, marginal couplet as on page 175, 1 around it, and on reverse second couplet) :—

Ashrafu-l-Bilád Aḥmad Sháhí.

Sháh Shujá Durráni. Coins of Sháh Shujá are of the following mints :—Ashrafu-l-Bilád Aḥmad Sháhí, Bahâwalpúr, Derajât, Dâru-l-amán Multán.

Maḥmúd Sháh Durráni. The rupees of Maḥmúd Sháh are of :—Bahâwalpúr (double rupees), Bahâwalpúr, Dâru-s-Sarúr Bahâwalpúr (type p. 178, 5), Ashrafu-l-Bilád Aḥmad Sháhí, Dâru-s-Salṭanat Hirât, Bhakkar, Peshâwar, Dâru-l-amán Multán, Derajât, Aḥmadpúr (type page 178, 5).

Aḥmadpúr is the old capital of the Bahâwalpúr State.

Baháwalpúr State Coins.

The Baháwalpúr State rupees found were of type p. 198, 2, and of mints :—Khánpúr, Dáru-s-Sarúr Baháwalpúr, Aḥmadpúr, and Baháwalpúr.

General.

It was a liberal action on the part of the Baháwalpúr State to afford an opportunity of examination of the old coins, and the inspection of so interesting a hoard was to me a great personal pleasure. I have made proposals that moderate prices should be fixed for the selected specimens, which would then be made available to the Museums and to private collectors.

DELHI:
February 28th, 1909.

R. B. WHITEHEAD.

70. THE DATE OF THE SALĪMĪ COINS : ADDENDUM.

In my article on the date of the Salīmī Coins, published in the Num. Supplement No. X, I adduced evidence to prove that these coins were issued by Salīm *after* his accession to the throne. At the time of writing that article I omitted through inadvertence reference to a half-rupee struck by Salīm at Kābul. It was described by Mr. C. J. Rodgers in the Journal of the Asiatic Society of Bengal for 1896, and has now been registered in the Indian Museum Catalogue, vol iii (No. 686, also plate vii). This half-rupee, bearing Salīm's name, is distinctly dated 1014 A.H.—thus the very year to which I assigned those of the Aḥmádábád Salīmī coins dated (Ilahī) 50. If we are to hold with Mr. Beveridge that the Aḥmadábád coins were issued while Prince Salīm was *de facto* Governor of Gujarāt, must we now maintain, on the strength of this Kábul coin, that in 1014 A.H. the Prince was also *de facto* Governor there? It is every way more probable that both at Aḥmádábád and at Kábul the coins first struck by Jahángír after his accession bore his princely name Salīm, and only the later, heavier, rupees his newly adopted royal name.

AḤMADÁBÁD:
17*th April*, 1909.

GEO. P. TAYLOR.

AUGUST, 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 4th August, 1909, at 9-15 P.M.

SIR THOMAS HOLLAND, K.C.I.E., D.Sc., F.R.S., F.G.S., President, in the chair.

The following members were present :—

Dr. N. Annandale, Mr. R. P. Ashton, Babu Rakhal Das Banerji, Babu Nilmani Chakravarti, Dr. Gopal Chandra Chatterjee, Mr. B. L. Chaudhuri, Mr. L. L. Fermor, Dr. W. C. Hossack, Mr. T. H. D. LaTouche, Hon'ble Mr. Justice T. W. Richardson. Mahamahopadhaya Haraprasad Shastri, Captain F. H. Stewart, I.M.S., Mr. G. H. Tipper, Rev. A. W. Young.

Visitors :—Mr. G. N. Bower, Babu Bidhu Bhushan Dutta, Mr. T. K. Ghose.

The minutes of the last meeting were read and confirmed.

One hundred and two presentations were announced.

The President read a letter from the Secretary to the Trustees of the Parsee Punchayet Funds and Properties, Bombay, relative to Prof. James Darmesteter Memorial Prize.

The General Secretary reported :—

1. That Mr. C. Michie and Captain C. A. Gourlay, I.M.S., had expressed a wish to withdraw from the Society.

2. That Babu Sanjib Chandra Sanial, Kumar Ramessur Maliah, and Mr. J. N. Das, of the Khalispur High School, Daulatpur P.O., Khulna, being largely in arrears of their subscriptions, have been declared defaulters, and that their names will be suspended in the meeting room in accordance with Rule 38.

The General Secretary laid on the table the following Report of the Proceedings of the Seventh International Congress of Applied Chemistry, submitted by Mr. D. Hooper as the delegate of the Society :—

The International Congress of Applied Chemistry is held every three years ; the last was held in Rome in 1905, and the gatherings had previously met in Belgium, France, Austria and Germany. The Seventh Congress was held this year in London, and as a delegate of the Asiatic Society of Bengal a short report of the proceedings is submitted to the Council.

No fewer than 3,000 members attended the London Congress this year, besides several ladies, and the meetings took place in the University of London, Imperial Institute, and the Royal College of Science, South Kensington.

On Wednesday, 27th May, a Mansion House banquet followed by a reception by the Lord Mayor and Sheriffs at the Guildhall served to introduce the scientists to each other. On Thursday afternoon the inaugural meeting, presided over by the Prince of Wales, was held in the Royal Albert Hall. Sir Henry Roscoe, the Honorary President, thanked the Prince for his address, and Sir William Ramsay, the President, accomplished the interesting feat of addressing the assembly in the four official languages of the Congress—English, French, German and Italian. The wet afternoon failed in damping the enthusiasm of the proceedings.

On Friday morning, at ten, the delegates and members plunged into the serious business of the Congress. For working purposes the subject of Applied Chemistry was divided into 18 independent sections. These included Organic and Inorganic Chemistry, Analysis, Metallurgy and Mining, Explosives, Physiological Chemistry, Colouring Matters, Sugar, Starch, Fermentation, Agriculture, Hygiene, Pharmaceutical Chemistry, Bromatology, Photography, Physical Chemistry, and Legislation affecting Chemical Industries. During the session that lasted for four days over 1,000 papers were submitted, about 600 were read, and many were eagerly discussed. Some of the sections were not so well attended as others, but there were enthusiastic experts in each. Organic Chemistry provided the largest number (111) of papers.

It is impossible to review the work of the various departments of the Congress, since, as expressed by one of the delegates, "there is not a single industry of any importance to man that did not claim tribute of chemistry." Bromatology is a new term in the technical world, invented to embrace the study of foodstuffs The following subjects were discussed in this section :—

Systems for the control of the food supply.
Legal standards of composition of food and drugs.
The composition and analysis of food and drugs.
The use of preservatives in food.

This section also discussed a report from the International Commission for the Unification of Analytical Methods; it devoted a whole afternoon to the consideration of cocoa and chocolate; and formulated international definitions of beer and brandy.

In the section of Hygiene 36 papers were presented dealing with such subjects as the sterilisation of water by ozone, lead poisoning, the purification of sewage by various methods, the

contamination of sea water by sewage, the control of noxious fumes, and the standardisation of disinfectants. These papers gave rise to a considerable amount of interesting discussion. Sir James Crighton-Browne presided over this section, and in the course of his inaugural address, suggested the appointment of a Government official to control the sale and use of disinfectants. In Agricultural Chemistry an afternoon was devoted to the consideration of a report from the International Commission for the analysis of artificial manure and feeding stuffs. Dr. Voelcker was the leading genius of this department, and Dr. Leather, of Pusa, represented Indian Agriculture, and contributed three papers.

In Section XI (Law, Political Economy, and Legislation affecting chemical industry) such subjects as the protection of industrial property, international patents, international trademarks were discussed. The importance of this section may be estimated from the fact that the Lord Chief Justice of England and Lord Justice Fletcher-Moulton addressed the meetings and presided over some of the deliberations.

Valuable papers were contributed to the section of Sugar, Starch, Fermentation and Pharmaceutical Chemistry. Demonstrations were given in the latest improvement in photography. Exhibitions were made of the newest colouring matters and their various applications. The Explosives Department considered smokeless powders and the coal-dust question. The members interested in Physiological Chemistry threw new light upon enzymes and the hydrolysis of albuminoids. The subjects represented great schemes for benefiting the health of large towns as well as for remedying individual inconveniences. It is of civic importance to utilise town refuse at a profit and prepare suitable forms of road-building material, and the general public will appreciate the latest device for deodorising the gas escaping from motor-cars.

In addition to the sectional meetings lectures of more general interest were given in the afternoon. The most popular lecture was given by Dr. A. Bernthsen on "The Oxidation of Atmospheric Nitrogen." It was delivered in the Central Technical College which was crowded to suffocation. The formation of nitric oxide from the air was demonstrated very successfully by electrical appliances. A daily paper next morning reporting the lecture prefaced it with the apt headline: "Saltpetre made while you wait." Other lectures were given by Dr. O. Witt, of Berlin, and Sir Boverton Redwood.

During the course of the proceedings excursions were paid to the National Physical Laboratory, the Metropolitan Water-Works, Hampton District Council Sewage Works, the Country Council School of Photo-Engraving, the Polytechnic, Messrs. Peak, Frean & Co.'s Biscuit Works, and Rothamsted.

The social side of the Congress was by no means the least

important. Beginning with the reception and conversazione given by the Lord Mayor at the Guildhall, every evening was fully occupied. There were the receptions at the Foreign Office, at the American Ambassador's house, the University of London, and the Natural History Museum, a garden party at Regent's Park Gardens, and a banquet at the Crystal Palace. It was not only pleasant but profitable at these gatherings to become acquainted with investigators in foreign countries previously known only by name. In the words of the President, "Through the Congress ancient friendships were renewed and other bonds were established which would advance the science to which they had devoted their lives."

The proposed new rules in connection with the creation of Fellowships in the Society, of which intimation had been given by circular to all Resident Members in accordance with Rule 64A, were brought up for discussion.

The Fellowships' Sub-Committee propose the following rules governing the election of Fellows :—

Rule 2A.—Among the Ordinary Members a certain number, not exceeding 50 at any time, shall be distinguished on account of eminence in literary or scientific work, as *Fellows*. During the year 1910, the number of Ordinary Members elected to this distinction shall not exceed 20; during 1911 and 1912 the number of additional Fellows elected shall not exceed ten in each year, and during all subsequent years not more than five Ordinary Members shall be elected to the distinction of Fellowship in one year. Ordinary Members elected to the distinction of Fellowship shall retain all the privileges and obligations of Ordinary Membership.

13A.—The Council shall, before the end of December, 1909, prepare a list of Ordinary Members whom they recommend to the Society for election to the distinction of Fellowship in accordance with Rule 2A. This list shall be suspended in the Society's rooms, and a copy shall be posted to each Ordinary Member not later than the 1st of January, 1910. The persons so nominated shall be balloted for at the Annual General Meeting in February, 1910.

To Rule 48 add clause—

(*h*) Subject to confirmation at the Annual General Meeting in February, 1910, to propose regulations to

govern the nomination and election of Fellows from among the Ordinary Members.

The following three gentlemen were balloted for as Ordinary Members :—

Mr. Digby Livingstone Drake-Brockman, I.C.S., proposed by Mr. H. R. Nevill, seconded by Mr. C. A. Silberrad; *Mr. J. P. Thompson*, I.C.S., Hoshiarpur, Punjab, proposed by Mr. R. Burn, seconded by Mr. R. B. Whitehead; *Babu Jyotis Chandra Bhattacharjee*, M.A., B.L., Vakil, High Court, Calcutta, proposed by Mr. Harinath De, seconded by Dr. A. Suhrawardy.

Dr. Annandale exhibited a series of drawings of Indian fishes made by Dr. F. Buchanan-Hamilton.

The following papers were read :—

1. *The constitution of the roots of Arisaema concinnum, Schott, and A. speciosum, Mart.—By* Bidhu Bhusan Dutta. *Communicated by* Mr. I. H. Burkill.

This paper has been published in the *Journal* for July 1909.

2. *On the Ova of a Distoma found in the Skeletal Muscles of Saccobranchus Fossils.—By* Dr. G. C. Chatterjee and T. C. Ghose.

3. *Punch-marked Coins from Afghanistan.—By* Rakhal Das Banerji.

4. *Two inscribed Guns from Assam.—By* Rakhal Das Banerji.

5. *Chemical Examination of Aurvedic Metallic Preparations: Part I, "Sata-puta lauha and Shahashra-puta lauha" (iron roasted hundred times and thousand times).—By* Panchanan Neogi, M.A., and Birendra Bhusan Adhikary, M.A. *Communicated by* Hon'ble Mr. Justice Asutosh Mukhopadhyaya.

6. *The origin of Indian Drama.—By* Mahamahopadhyaya Haraprasad Shastri.

These papers will be published in a subsequent number of the *Journal*.

—◇—

The Adjourned Meeting of the Medical Section of the Society was held at the Society's Rooms on Wednesday, 11th August, 1909, at 9-30 P.M.

Lieut.-Col. F. P. Maynard, I.M.S., in the chair.

The following members were present :—

Lt.-Col. E. H. Brown, I.M.S., Dr. Adrian Caddy, Dr. G. C. Chatterjee, Captain F. P. Connor, I.M.S., Lieut.-Col. C. R. M. Green, I.M.S., Dr. W. C. Hossack, Dr. A. M. Leake, Captain R. E. Lloyd, I.M.S., Dr. Indumadhab Mallick, Captain D. McCay, I.M.S., Captain J. W. D. Megaw, I.M.S., Dr. Girendra Nath Mukerjee, Major J. Mulvany, I.M.S., Lieut.-Col. A. H. Nott, I.M.S., Dr. T. F. Pearse, Captain H. E. Smith, I.M.S., Captain E. E. Waters, I.M.S., Major L. Rogers, I.M.S., Honorary Secretary.

Visitors :—Dr. S. N. Bhattacharjee, Dr. C. Mackenzie, Dr. G. C. Mitra, Major W. D. Sutherland, I.M.S.

The minutes of the last meeting were read and confirmed.

The presentation of a large number of medical journals by Lieut.-Col. G. F. A. Harris was announced. A vote of thanks to the donor was carried unanimously.

A demonstration of the precipitin test for human blood was shown by Major W. D. Sutherland, I.M.S. A discussion followed in which Lieut.-Cols. Green and Maynard and Dr. Hossack joined.

The following resolution was proposed by Lieut.-Col. C. R. M. Green, I.M.S., seconded by Captain D. McCay, I.M.S., and carried unanimously :—

> "The Medical Section of the Asiatic Society, having had demonstrated to them the precipitin test for human blood, are of opinion that it is a practical test when conducted by an expert, and can give valuable assistance in medico-legal practice. They consider that the time has come for making the test available in medico legal procedure in this country."

The following paper was read :—

On some Surgical Cases. *By* LIEUT.-COLONEL E. HAROLD BROWN, I.M.S.

The discussion was joined in by Lieut.-Colonels Nott, Green and Maynard, and Major Waters.

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Silver and Copper Coins of the Bahmani Kings of Gulburga.

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Silver and Copper Coins of the Bahmani Kings of Gulburga.

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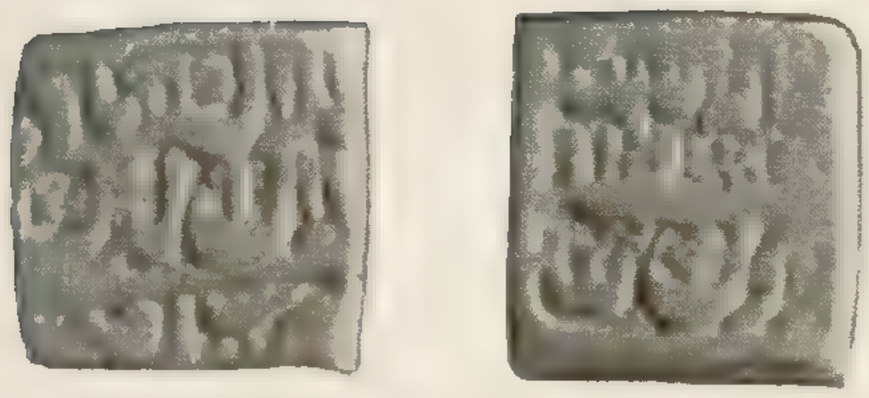
To be substituted for Plate XIV issued with the Journal and Proceedings, Asiatic Society of Bengal, Vol. V, No. 8, August 1909.



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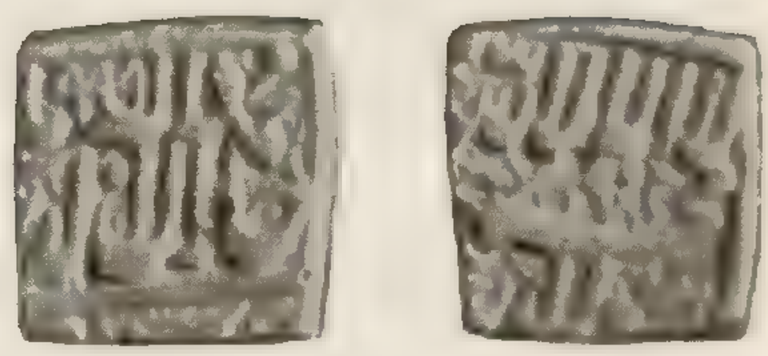

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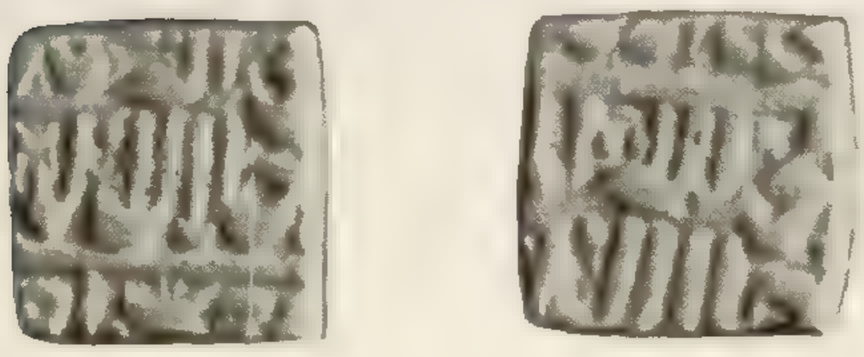

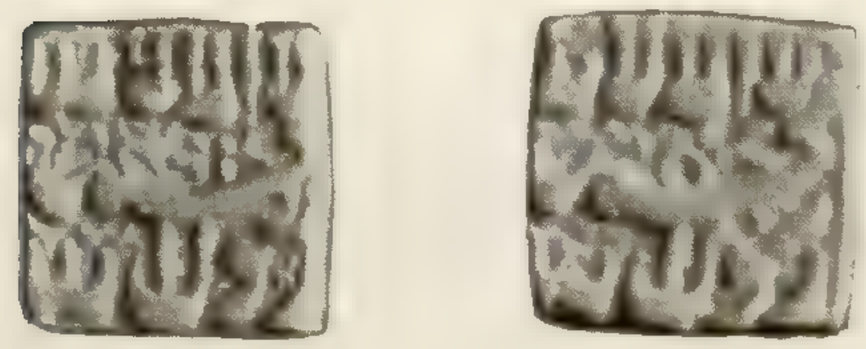

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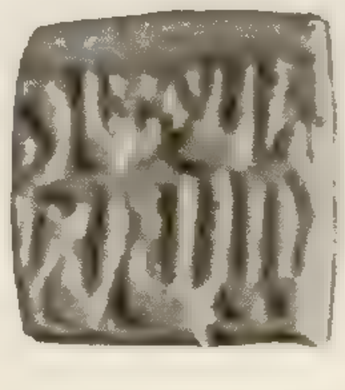

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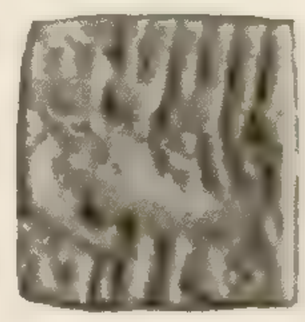

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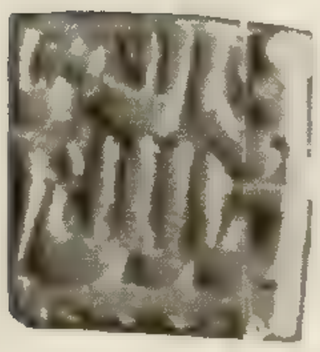

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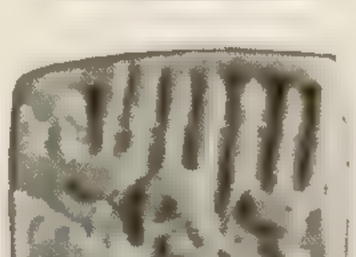

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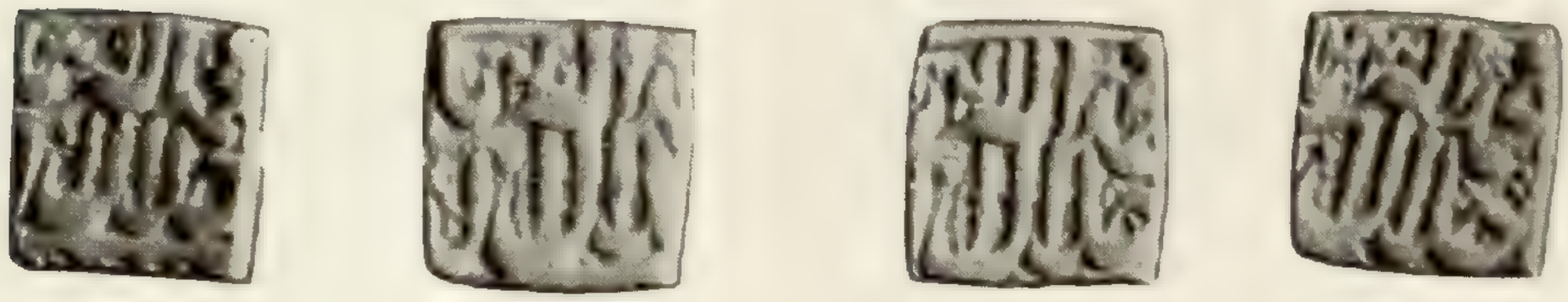

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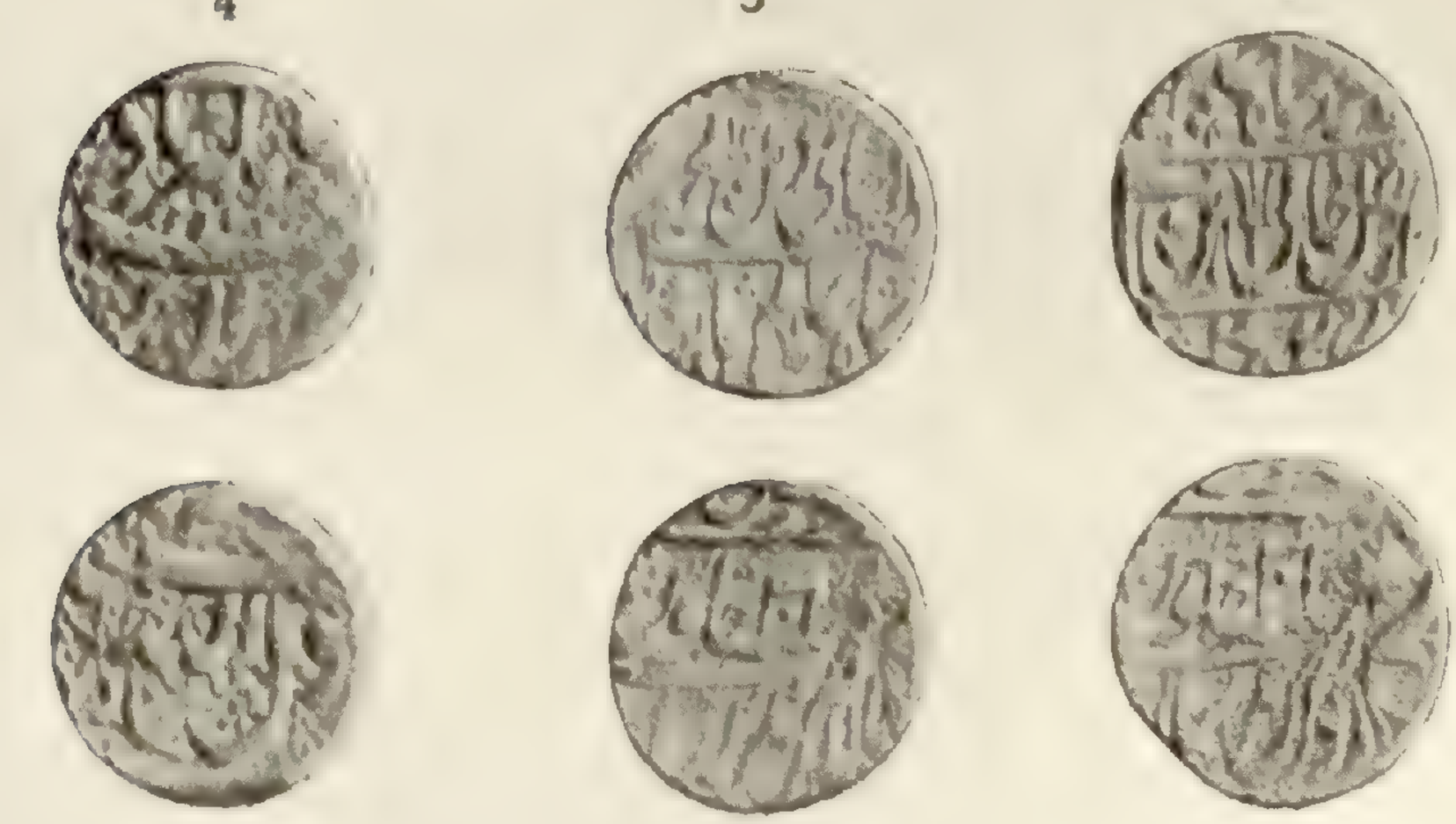

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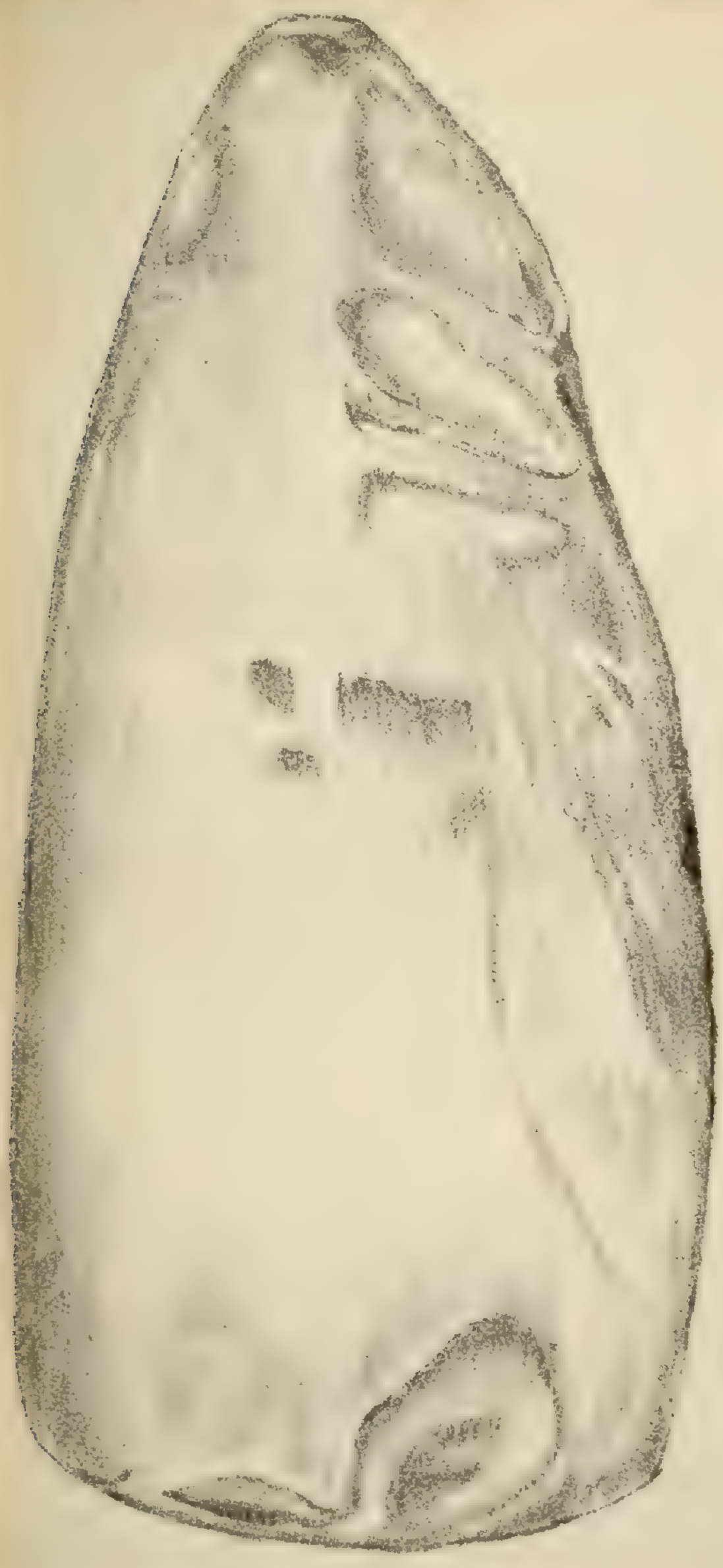

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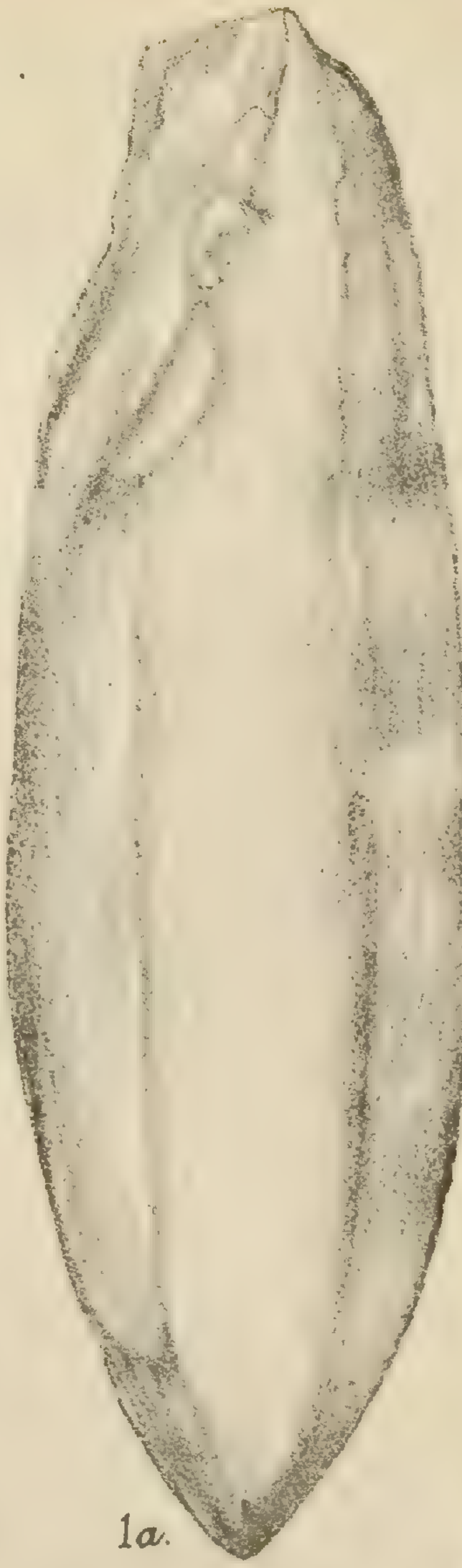

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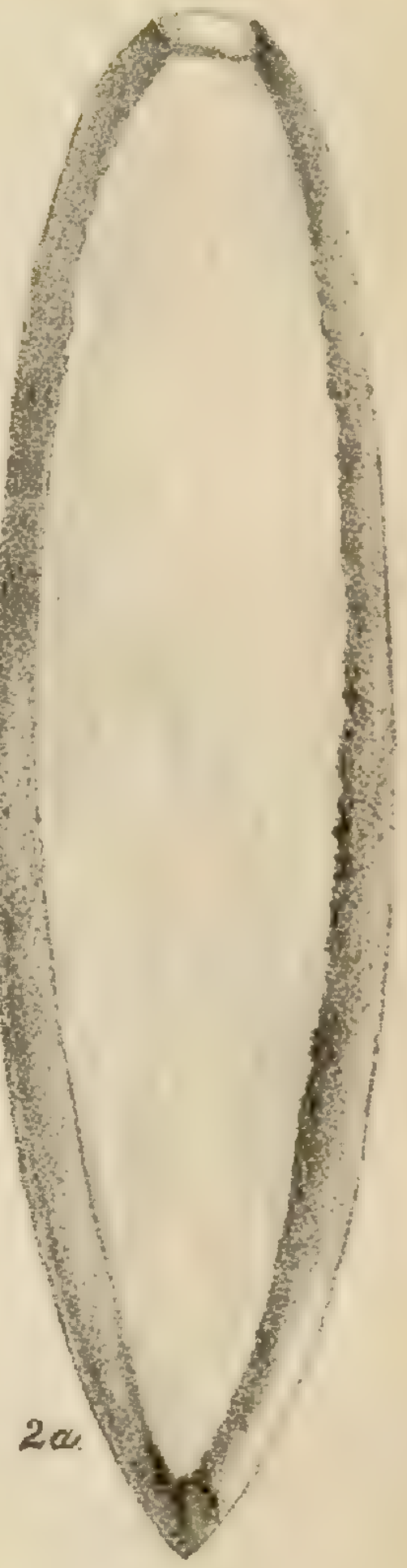

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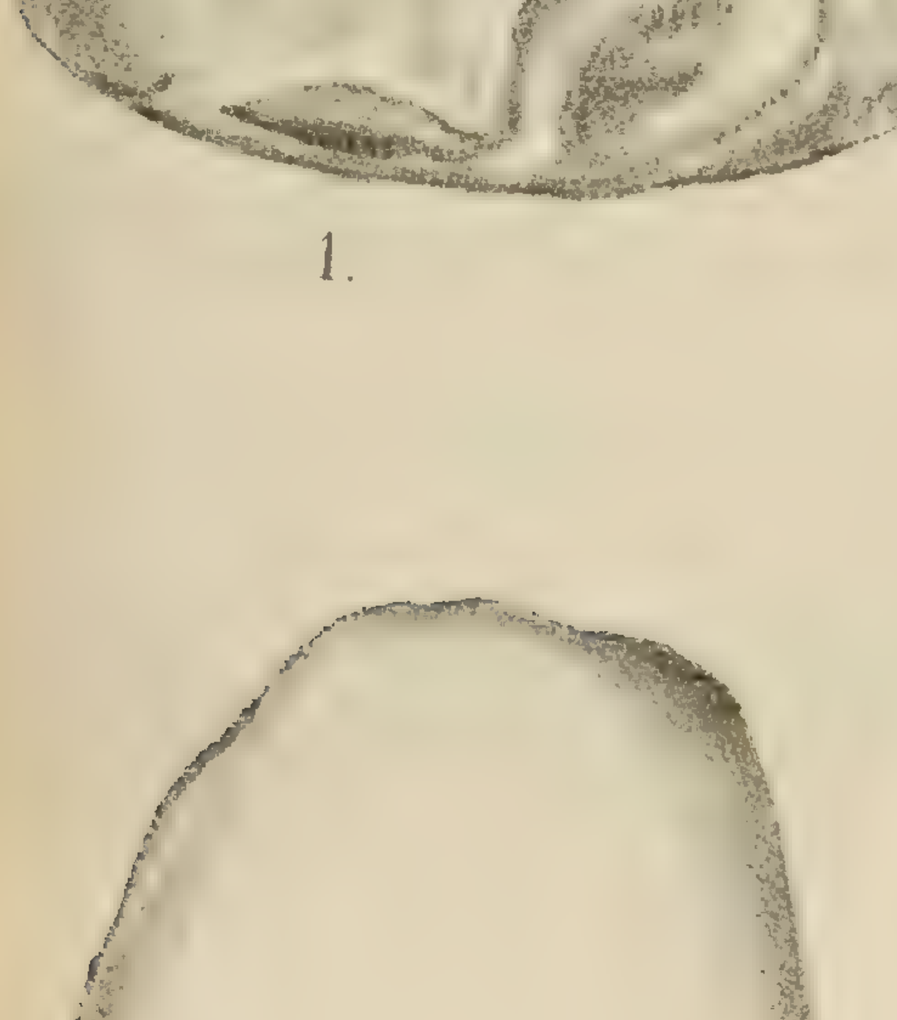

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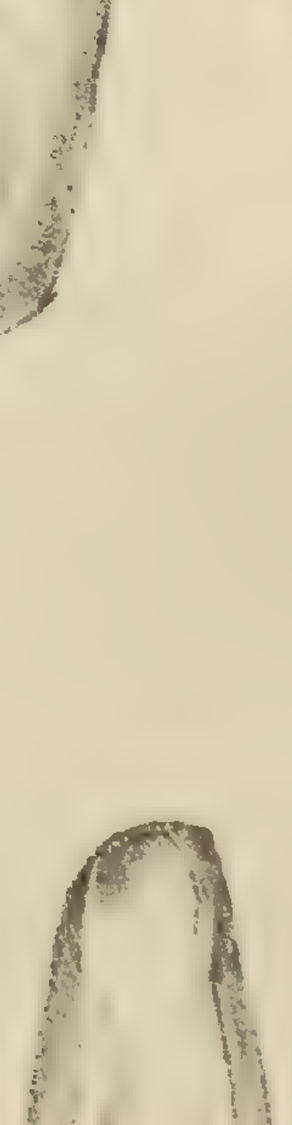

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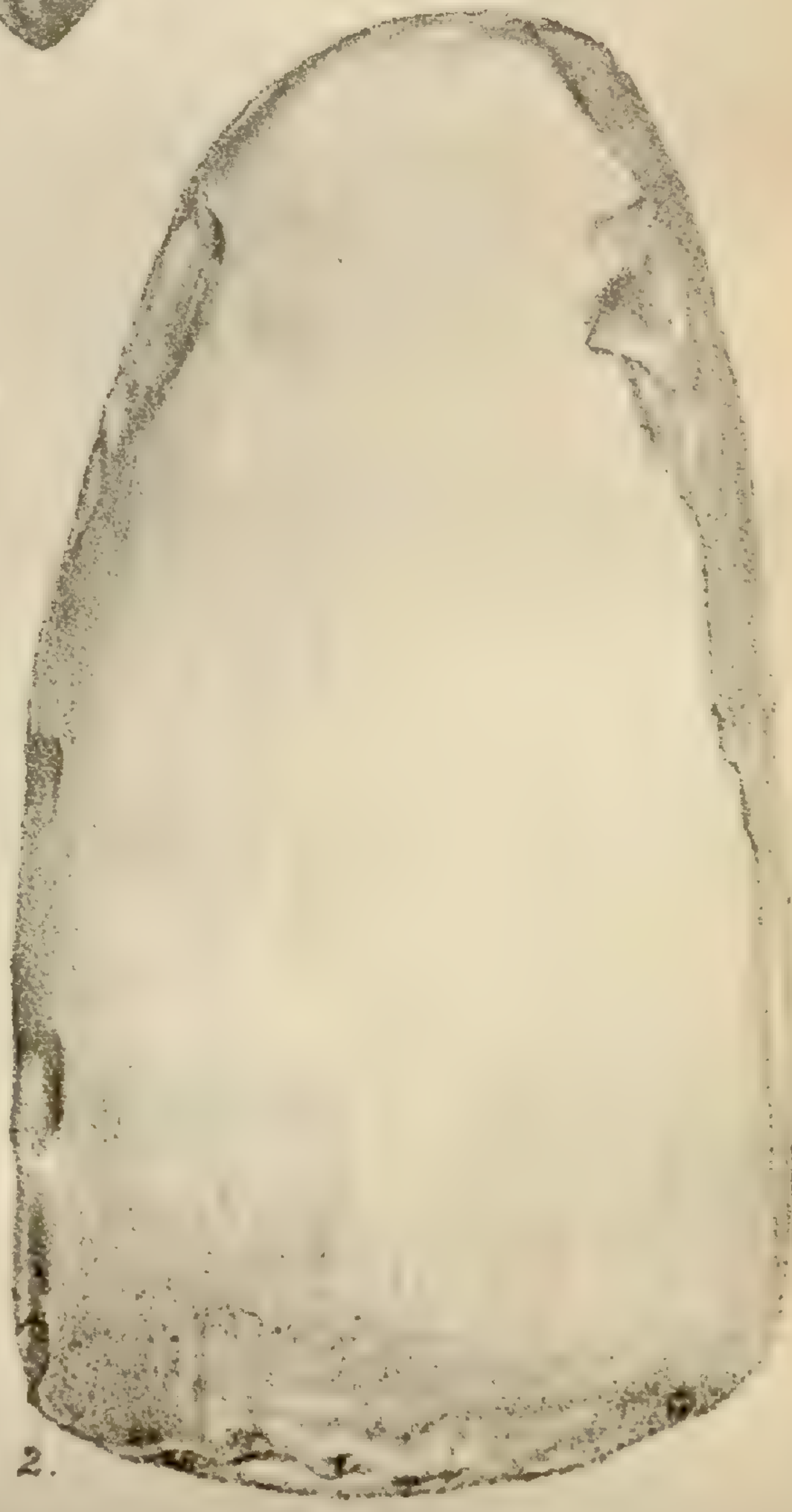

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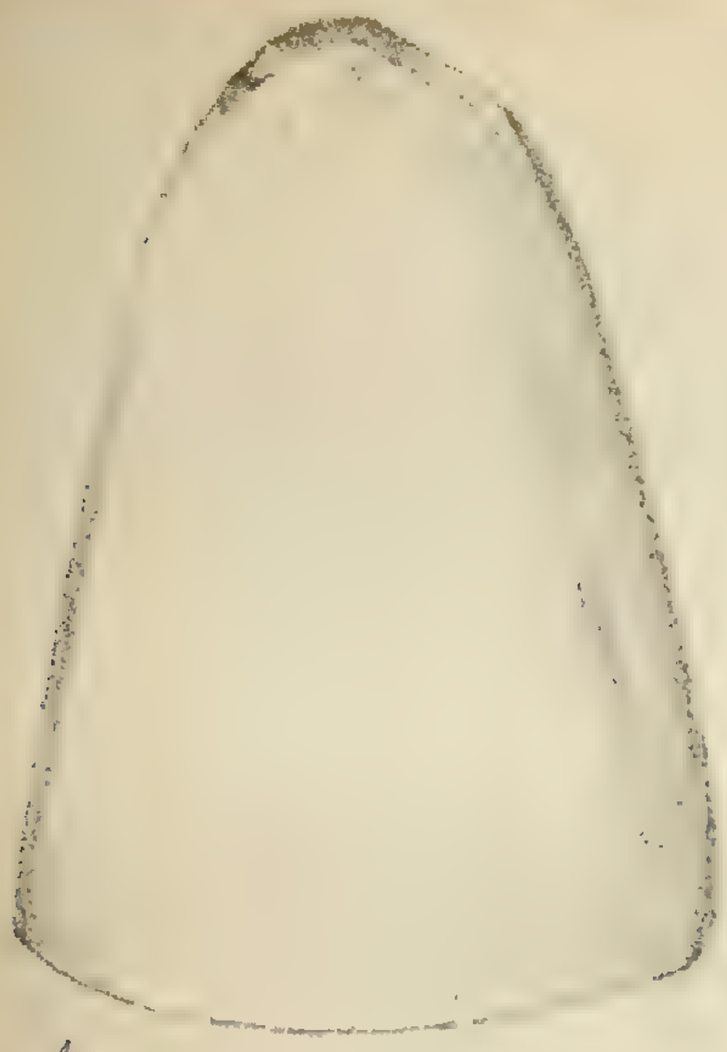
Stone Implements, Tongyuch District.



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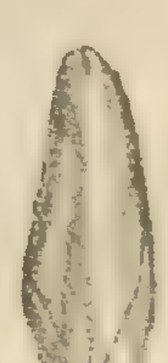

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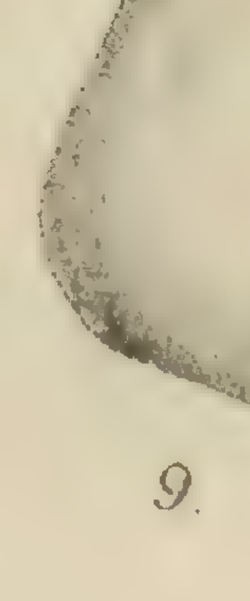

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Stone Implements, Tongyuch District.

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OF THE

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Vol. V, No. 9.

OCTOBER, 1909.

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1910.

Issued 3rd March, 1910.

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30. Plate of Gayāḍa Tuṅga Deva.

By Nilmani Chakravarti, M.A.

This copper-plate has been for some time in the possession of the Asiatic Society of Bengal, and there is no mention in the Proceedings to show how the Society received it. The plate is rectangular, 6″ × 5,″ very heavy, with an elliptical brass seal soldered on its upper side. On the seal is the figure of a bull standing before a tree, above which is the name of the king *Śrī Gayāḍa tuṅga devasya*, and above the name is a crescent with a small circle, the symbol for sun and moon. The plate is inscribed on both sides and the letters are deeply cut and in a good state of preservation.

From palæographic considerations the inscription may be assigned to the 11th century A.D. A comparison of the writing on this plate with that on the plates of *Mahābhavagupta* (Ep. Ind., vol. iii, pp. 342, 348), which have been assigned to the 11th century A.D. by Dr. Fleet, shows that while in almost all cases the letters are identical. in some they show a little difference; *e.g.*, the letters *ja* and *ha*. The lowest line of *ja* ends, in the plates of *Mahābhavagupta*, in a curve, while in this plate it ends in a perpendicular line. The letter *ha* has two perpendicular lines in the plates of *Mahābhavagupta*, but here it ends in a single line. A comparison of the palæography of this plate with that of Deopara inscription, assigned by Bühler to 1100 A.D., is in favour of placing it earlier. A further palæographical peculiarity is the inversion of the sign of long vowel *ā* in lines 29 and 31, in the word *māla*, where instead of being written by the side of the letter it has been represented by an upward stroke on the seriff. The language is hopelessly corrupt Sanskrit prose, although the author in the beginning indulges in a display of high-sounding metaphors. It is useless to attempt correction of the whole text.

The object of the inscription is to record a grant of land by a certain king *Gayāḍatuṅga* who claims descent from the *Tuṅga* dynasty, which belonged to the *Sāṇḍilyagotra* and came from *Rohitāgiri*, the modern Rhotasgarh in the Shahabad District of Bengal. From an inscription published in the Epigraphia Indica, vol. iv, p. 311, we come to know that a Hindu prince named *Pratāpa* was ruling there in samvat 1279. Whether there was any connexion between his family and that of the *Tuṅgas*, we have no means to ascertain. *Gayāḍatuṅga* calls himself *Parama-māheśvara*, *i.e.*, a great *Saiva*, a fact

which is manifest from the bull-symbol on the seal. From line 6 it appears that he was a *Maṇḍaleśvara* only, and the territory over which he ruled was known as *Yamagartamaṇḍala*. The genealogical portion of the inscription offers some difficulty. In line 11 there is mention of a king *Vāṇāryaśatro*, and line 13 another of the name *Jagatuṅga*. It is very difficult to ascertain the connection between these two. Either these two names belong to one and the same person, *i.e.*, *Vāṇāryaśatro* is a surname of *Jagatuṅga*, or the former might have been a predecessor of the latter. In the line of *Jagatuṅga* there was a prince named *Salāṇatuṅga*. Then again the connection between *Gayāḍatuṅga* and *Salāṇatuṅga* has not been clearly stated in the inscription. Most probably *Gayāḍatuṅga* was the son of *Salāṇatuṇga*. The land granted comprised a village named *Toro*, situated in the *Veṇḍuṁga Vishaya* in the *Yamagarta maṇḍala*, and the donees were a number of *Brāhmaṇas* who came from *Ahichhatra* and settled at the village *Kuruvābhaṭa* in the *Oḍra-vishaya*. The village lands were distributed in the following way, *viz.*—(1) one-sixth *māla* was given to *Dādo*, son of *Govinda* and grandson of *Kakā Ojhā*; (2) one-sixth *māla* to *Trivikrama* and *Purushottama*, sons of *Vishṇudīkshita*; (3) one-eighteenth *māla* to five brothers Rāmadeva, etc., sons of Madhusūdana; (4) one-eighteenth *māla* to *Vishnu*, son of *Duvilla*; (5) one-eighteenth *māla* to *Ghāllo*, son of *Sāha*; (6) one-sixth *māla* to *Nārāyaṇa*, son of *Ghāllidāma*; (7) one-twelfth *māla* to three brothers *Śrīghosha*, etc., sons of *Vedaghosha*; (8) one-eighteenth *māla* to *Trilochana*, son of *Trivikrama*; (9) one-thirtysixth *māla* to *Valadeva*, son of *Avida*; (10) one-twelfth *māla* to *Manorava* and *Devaśarma*, sons of *Pauma*; and (11) one-twelfth *māla* to *Sadhovaṇa*, son of *Ananta*. The word *māla*, which has been used 11 times in this inscription, seems to indicate high or cultivable land as opposed to low or marshy land which are incapable of being cultivated. As to the meaning compare the expression *Mālabhūmi* which means a table-land; also *cf. Kshetramāruhya mālaṃ* in *Meghedūtam*. Dr. Bloch has kindly supplied two notes on the word *māla* meaning a measure of land: (1) *mā* 'measure of land' = $\frac{1}{20}$ of a Veli, Ep. Ind. vii, p. 143, note: (2) *māla dvādaśake grāmaṁ śāsanaṁ Vaṭagarttikāṁ*. Karitalai (District Jabbulpur, C. P.), stone inscription, Ep. Ind., ii, p. 179, v. 36; *vide* p. 175 (Kielhorn), "the village Vaṭagarttikā in the *mālā* group of twelve"; *cf.* also *Medinī* "*Mālaṃ Kshetre.*"

TEXT.

Obverse.

(1) oṃ Svasti Āva [d] dh-ō [d] dhata-dvipa-gaṇḍa-sthala-galad-avirala-mada—

(2) malita [1]—madhukar—āvalī—jha (ṁ) kṛiṇe (t-ai) ka—pradoshāt pravu (bu) [d] dha—tēyaḥ (jo)—vipra—

(3) Varai Rik [2]—sāma—yajur— veda— dhvanī (ni) bhir—nivaha—pratikṛita-sakala-jana—

(4) Padāt anavarata-dvija-huta-hutavahōhu (dbhū) ta-dhūma-sañchayo (ya)-praha—

(5) Sita-samasta-risi-vāsakāt [3] *Mahāparvatā*-bhidhāna-parvatōda—

(6) rindatā ? Tuṅga-nare[n]drā-ṅkita-tano (ḥ) *Yamagarta* maṇḍala gataḥ dūrvārā [4]—

(7) rāti-mādya [d] dvirada-vara-ghaṭā—kumbha-pi (pī)ṭha prahāra-vyālagna-muktāpha—

(8) la-nikara-karālāsi-dhārā sphurantī dṛishtvā bhagne nivārita pra—

(9) hasita vati yasyā [5] grāme bhūmau Sa Śrī Gayāḍa-tuṅga prathita pṛi—

(10) thu-yaśas-tuṅga—vaṁśa(ā) d-vabhūva sad-vi(vī)ry-āścharya-bhūto nija-bhuja-mahimo—

(11) pārjita-pūjita-śrī-rājā-vāṇārya-śatro satatam-apichalā niścha—

(12) lā yasya Llakshmi [6] śāṇḍilya-gotrād-utpan [n]a Rohitā-giri-nirgata—

(13) rājā-Jagattu [ṅ]ga—rūpa-vi(vī)rya-valā-nvita(ḥ) tasyā-nvayo (yaḥ) Salāṇatuṅga—

(14) Śṛi (śrī) mān-ūrjita—Vimatasyā vabhūva dharmajño dugdhāv (b) dher-iva chandramā.

(15) Parama-māheśvara-samadhigata-paṁcha-mahā-śav (b) da-śrī-Gayāḍatu—

(16) ṅga-deva kusha (śa) lī etanmaṇḍale-smin bhāvino sāmantaka-sāma—

(17) Vājini-jana-janapadā yathārihaṃ vodha(ya)ti kusha (śa) layaty = ādisa—

(18) yati [7] cha viditam = astu bhavatāṁ *Veṇḍuṁga*-Vishaya samva (ba) [d] dha—Toro-grā—

(19) mo = yam chatu [ḥ] si (sī) mā—paryanta Ahichhatra—Vinirgata Oḍra-vishaye *ku*—

(20) Ruvabhaṭa—grāma-vāstavya kusika-gotra—trīyārsha pravara-bhaṭṭa—

Reverse.

(21) putra—Dādo—Govinda-suta—Kakā-ojhā—naptra (e) bhāga āṁsa [8] shashṭha-māla-a—

(22) para—khaṇḍa-kṣhetra—bhaṭ [ṭ] a-putra—Trivikrama-Purushottama—Vishṇudi (dī) kshita-su—

---

[1] Read *malina.*
[2] Read *varair = Ṛik.*
[3] Read *samastarshi āsakāt.*
[4] Read *durvārā.*
[5] Read *yasya.*
[6] Read *Lakshmīḥ.*
[7] Read *ādiśati.*
[8] Read *aṃsa.*

(23) ta-bhrātara-dvayena āṁsa shashṭha-māla apara-khaṇḍa kshetra—pañca-bhrāta—

(24) rena bhaṭṭaputra Rāmadeva—Madhusūdana-suta aṁsa ashṭādasa-mā—

(25) la apara-khaṇḍa kshetra bhaṭ [ṭ]aputra Vishṇu-Duvilla-suta ashṭādaśamā—

(26) la aṁsa bhaṭ[ṭ]a putra—Ghāllo-Sāha-suta aṁsa ashṭā-daśa-mālā (la) apa—

(27) ra-khaṇḍa kshetra bhaṭ [ṭ] a putra Nārāyaṇa-Ghālli dāma-suta-aṃsa shashṭha-mā—

(28) la bhaṭṭa putra-Śṛi (śrī) ghosha-Vedaghosha-su [ta] tṛi-ṇi-bhrātarena aṁśa dvādaśa—

(29) māla bhaṭ [ṭ] a putra Trivikrama-suta tṛi (Tri) lochana —aṁsa-ashṭādaśa-mā—

(30) la bhaṭaputra-Valadeva Avida-suta āṁsa [1] shaṭ tṛi (tri) ṁśa-māla bhaṭaputra Ma.

(31) norava-Devasarma-Pauma-[2] suta-bhrātara-dvayena āṁ-śa-dvādaśa-māla—

(32) bhaṭ [ṭ] a putra Sadhovaṇa [3] Ananta-suta-ā[ṁ]śa dvā-daśa māla ete brāhma—

(33) ṇena Toro-grāma-kara-śāsana-kṛita rūpya paṁcha na-vena aṅkenāpi—

(34) rūpya [45] tṛiṇoka[4] pūrvakena mātā pitror-ātma-naś=cha puṇya-yaśo—

(35) bhivṛdh(ddh)aye tāmra-śāsanīkṛitya Pradat [t] o= smābhiryāvach=chandrārka-ta—

(36) rakāṃ(aṃ) achaṭa-bhaṭā (a) praveśa na kenāpi vādhā karaniya uktañ=ca.

(37) Dharma-śāstre Vahubhir=vasudhā dat [t] ā rājabhi-(ḥ) sagarādibhi (ḥ) yasya—

(38) yasya yadā bhūmis=tasya tasya tadā phalaṃ—

(39) svadat [t] ā [ṁ] paradat [tā] m-vā yo—

(0) hareta Vasundharāṃ sa viṣhṭhāyām kṛimir=bhūtvā pitṛibhi [s] saha pa hyate=ti.

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[1] Read *aṁsa.*

[2] Dr. Bloch reads *Paduma.*

[3] Dr. Bloch reads *sathaveṇa.*

[4] Read *Triloka.*

31. The Origin of Indian Drama.

By Mahamahopadhyaya Haraprasad Shastri.

Bharata the traditional founder.

Indian tradition almost uniformly assumes that Bharata is the founder of Indian Dramatic Art. Kālidāsa in his Vikromorvasī speaks of Bharata as the playwright and the stage-manager of the gods in heaven. Bhababhūti, in his Uttararāmacarita, speaks of Bharata as the नाट्यचिकद्भचकार, that is, the earliest writer on instrumental music. The actors were always called Bharataputras. The great work on Indian dramaturgy is named Bharata Nāṭyāśāstra. In that book Bharata is the principal interlocutor, and he speaks in the first person, as having received the knowledge of the dramatic art from Brahmā as a revelation, and calls it the fifth Veda.

Pāṇiṇi's testimony.

Pāṇini, however, speaks of Śilāli as the Ṛṣi by whom Nāṭyasūtras were spoken (4. 3. 110). He also speaks of Kṛśāśva as another Ṛṣi by whom the Nāṭyaśūtras were spoken (4. 3. 111). This shows that the profession of actors is older than Pāṇiṇi, whose age has not yet been ascertained with any certainty. Indian paṇdits like Sāmaśrami would make him live in 2300 B.C., while Bühler, basing his argument on a story given in the Kathāsaritsāgara, would place him in 400 B.C. His conclusions have not yet been accepted. But the priority of Nāṭyaśāstra to Pāniṇi cannot be denied.

Epigraphic evidence.

More than sixty years ago Colonel Ouseley discovered two caves in the Rāmagaḍh hills in Sirguja country inscribed with sentences in Aśoka-characters. The inscriptions in their nature were neither historical, nor religious. Recently Ḍr. Bloch visited these caves, took new impressions of the inscriptions and interpreted them to be theatrical. Lūpadakhe, in that inscription, he interpreted as expert in acting. And inside one of the caves he found a stage with paintings still faintly discernible, with galleries for the audience, with holes for putting in screens, and so forth (see his report in Archæological Annual, Vol. 2). The stage, he thinks, should be as old as the inscriptions, that is, second or third century B.C.

Professor Nöldeke thinks that the word Pahlava, which is so often met with in Indian literature for Parthians, cannot have originated before the first century A.D. But Professor Bühler, in the introduction to his translation of Manu, says: 'With all due deference to the weight of Professor Nöldeke's

name, I must confess that it appears to me very hazardous." But the mere mention of the Pahlavas would show that the verse in Manu mentioning Pahlavas cannot have been composed before the beginning of the first century B.C.

The age of Bharata Natyasāstra.

If the above statement is entitled to any weight, the Bharata Nātyasāstra is to be placed before the composition of the Code of Manu. In Manu x. 43-44, Śakas, Yavanas, and Pahlavas are enumerated. From this enumeration Bühler comes to the conclusion: "The work seems to have been composed between the second century A.D. and the second century B.C." But in the Bharata Nāṭyasāstra Parthians are mentioned along with Śakas and Yavanas as in Manu (see Nāṭyasāstra xxv. 89). But the Parthians are mentioned not as Pahlavas but as Pāhravas. The Paṇḍita editor of the Nāṭyasāstra not knowing the word, and unwilling to change it, has queried it. This leaves no doubt that the word in the manuscripts consulted is Pāhrava. So Professor Nöldeke's objection does not hold here. The Parthians came to power by the middle of the third century B.C., and their name had not been changed into Pahlava when this book was written. For all practical purposes therefore the compilation of the Nāṭyasāstra may be placed in the second century B.C., almost at the time when Rāmagaḍh caves were converted into theatres.

Contents of the Nātyasāstra.

An examination of a work so old, so large, and so elaborate as the Nāṭyasāstra is likely to prove exceedingly interesting. It embodies traditions of the past and it reveals Indian life in that remote age in all its multifarious phases. It shows life as it was, and not as in Manu, what it should be. Manu seems to have been aware of the influence which the stage was exerting on the people, and he was very vehement in denouncing the profession of actors. In fact, he prohibited Brāhmaṇas from becoming actors. In a work older than Manu, namely, Kauṭilya's Arthaśāstra composed about 300 B.C., the stage was an established fact and the Kuśīlavas were a numerous class.

Form of the book.

The book is written throughout in Śloka metre, except where short ancient words are imbedded in it. If we accept Max Müller's theory this book was written immediately after the Sūtra period, that is, about the second century B.C. According to the fashion current in those days it is written in the form of interlocution between Bharata and the Munis, just as Manu is an interlocution between Manu and the Munis, and afterwards between Bhṛgu and the Munis. The Mahābhārata, too, is an interlocution between Sūta and the Munis. In this book, as in all similar works, the principal interlocutor speaks in the first person. But the difference between this work and the others

is, that the principal interlocutor is the principal actor throughout this book, that is, he speaks of his own acts.

It is the fifth Veda.

The work says, in the second age of the Vaivasvata Manu rustic habits prevailed and men became miserable; so Indra and other gods prayed to Brahmā for some sporting thing which may benefit the Sūdras as well. Brahmā immediately summoned the four Vedas and acquainted them with the petition of the gods and invoked their assistance in bringing a fifth Veda into existence. Ṛgveda gave him dialogue, Sāmaveda gave him songs, Yajurveda gave him acting, and Atharvaveda gave him *rasa* or æsthetic pleasure. The new Veda was complete, and Bharata presented himself to Brahmā and asked to be the first professor of the new Veda.

Connected with Indrayatra.

Brahmā said: "The ceremony of raising the flag-staff of Indra is near at hand; show your skill in the ceremony." Bharata settled the preliminary prayers, and so on, and enacted a drama in which the gods defeated the Asuras. The performance pleased all the gods, and each of them presented something useful to the stage. But the Asuras got annoyed. They thought that this was another invention of the gods to humiliate, to ridicule and to torment them, and so they began to throw obstacles in the way of the performance.

This angered Indra very much. He rooted out the flagstaff with which he belaboured the Asuras. From the act of belabouring, the staff was called (जर्जर) Jarjara [1.39]. The Jarjara or the bruised flagstaff of Indra became afterwards the emblem of the stage. It received its worship first of all in a performance. It had six joints and five interspaces between the joints. each interspace was dedicated to a deity and covered with a rag of one colour; and it measured 108 *aṅgulas* or 72 inches. It may be made of any wood, preferably of bamboos. This is an indication that the dramatic art originated in that part of India where bamboos grow in abundance. But this belabouring of Asuras was not agreeable to Bharata, who, with all his sons, prayed Brahmā for the protection of plays. Brahmā ordered Viśakarmā to erect a building and asked the different gods to protect different parts of the building. Brahmā also invited the Asuras and explained to them the object of the new invention. It is neither for the gods nor for the Asuras. It is for the instruction and amusement of all.

Different forms of theatre.

Professor Macdonell, in his history of Sanskrit literature, says that the Hindus had no public theatres and the dramas used to be enacted in the dancing-halls of princes. But the existence of such a word as Prekṣāgṛha or Pekkhāgharaa stands against his theory. In the second chapter of the

Nāṭyśāstra three different forms of Prekṣāgṛha are prescribed. The first is called Vikṛṣṭa, elongated or elliptical, 108 cubits in length. This is prescribed for gods, *i.e.*, in temple. The second is a rectangle 64 cubits in length and 32 in breadth. This is for princes and noblemen. There are indications that this form was prescribed for the public theatres in large centres of population; the third is an equilateral triangle, each side of which is 32 cubits in length. This is a private theatre.

The inter-arrangements of theatres.

Half of the length of each of the different buildings was to accommodate the audience. Different castes were to sit at different places, indicated by columns of different colours. Galleries were formed one behind the other, each bench being one cubit higher than the one in front. The Brahmins had the front seats indicated by white columns. The Kṣatriyas had their seats indicated by red columns. Behind them sat the Vaiśyas and the Śūdras—Vaiśyas to the north-west and Śūdras to the north-east—their seats being indicated by yellow and blue columns. There were other columns too, perhaps for those not included in the caste-system. There was a verandah above the auditory in which, too, seats were arranged as before.

The other half of the building was given over to the actors. The hindermost part was called the Raṅgaśīrṣa with six columns where the worship was conducted, with Brahmā the author of the Nātyaveda as the chief deity. It occupied one-eighth of the building. It was connected with the greenroom (Nepathyagṛha) by two doors. From the greenroom to stage there may be one or two doors. The stage is sometimes two storied, the higher storey to represent scenes in heaven; but the whole stage was covered with pictures either in basrelief or on canvas representing landscapes, gardens, parks, palaces, houses, temples. rivers, mountains, forests, etc.. which in the absence of movable scenes served the purposes of securing representation.

Worship.

Most elaborate forms of worship are prescribed for the erection of every part of the building. The Brāhmaṇas had to be fed at every turn; sometimes with rich and sometimes with ordinary food. It is enjoined that deformed and ugly persons should on no account be employed in connection with any work concerning the building. Friars and monks and other mendicants should not be allowed to approach the building. The most important ceremony in connection with the worship is the consecration of जर्जर. In the evening previous to the worship, it is to be laid down in the theatre-building with a *mantra* given in verse II, 12. The next day after the worship of all the gods the jarjara was to be worshipped. It had five joints, presided over by five deities—Brahmā, Viṣṇu, Śiva, Kārtika and the serpents. The first joint is to be covered with white cloth, the

second with blue, the third with yellow, the fourth with red and the fifth with cloth of variegated colours.

The first Dramas.

It has been already explained that the dramatic plays began with the raising of the flagstaff of Indra after the conquest of Asuras. After the completion of the theatre-building Bharata asked Brahmā what play to enact. The order was Amṛta-Mathana, which p eased the gods very much. They longed for entertaining Siva with a dramatic representation, and Tripuradāha was enacted before him in the Himalayas. Śiva was very much pleased, and he suggested an improvement, to include dancing in theatre.

The beginning of Dance.

After the destruction of the sacrifice of Daksa, Śiva in the evening danced with various gesticulations to the tune of music. Śiva assumed any posture, and in this matter imitated all the principal gods. These postures were known as Piṇḍībandha.

The position of the hands, of the feet, of the waist, of the sides, of the thighs, of the belly, of the back, and of the chest is necessary in a dance. Sometimes they have slow motion and sometimes quick motion. These movements are called the mātṛkā or the mothers of dance. A combination of three or four of these mothers is called a karaṇa or action. One hundred and eight of such actions are enumerated. Different combinations of these actions are called अङ्गहार or gesticulation. Thirty-two of such gesticulations are enumerated. Four different ways are enumerated for gracefully putting a stop to dancing. They are called Recakas. All these Recakas, Aṅgahāras and Piṇḍībandnas were created by Mahadeva after the destruction of the sacrifice of Dakṣa. He taught all these to Taṇḍu. Hence the art of dancing was known as Tāṇḍava.

Introduction of Dancng in Theatres.

Delighted with the performance of the drama Tripuradāha, Mahādeva ordered Taṇḍu to impart the knowledge of dancing to Bharata. The Munis asked Bharata,"Why was the dance included in a dramatic performance? It does not help the story, it does not produce an emotion. Acting is quite enough for these purposes Why was then dancing included in a dramatic performance?" In reply to them Bharata says. "Dances do not help dramatic action but beautify it." They are very popular, and on all auspicious occasions people resort to dancing. For this reason dancing was introduced in a dramatic performance in connection with songs.

Pūrvaraṅga or the preliminaries.

The preliminaries are :—(1) The arrangement of musical instruments. (2) The position of the musicians among themselves. (3) The beginning of songs. (4) Examining musical instruments. (5) Setting musical instruments to vocal music. (6) Setting stringed instruments to vocal music.

(7) Setting the hands of the musicians to different instruments. (8) Concert of stringed and other musical instruments. (9) Keeping time. (10) Singing the praise of the gods. All these are to be done outside the stage behind the screen. Then the curtain is to be raised and the manager is to enter the stage. He is to turn round in all directions to make his obeisance to the lords of the ten quarters. Then comes the well-known Nāndī, and then a number of ślokas on the jarjara, then acting commences with gestures and gesticulations and amorous movements, as well as with terrible strides.

The manager in entering the stage.

On the curtain being raised, Sūtradhāra is to enter with a palmful of flowers, accompanied by two companions, one with a Bhṛṅgāra and the other with the jarjara. He should advance five steps with a view to worship Brahmā. At the centre of the stage Brahmā is supposed to be always present. There the flowers were to be strewed. Then with a graceful movement of the hand Brahmā was to be bowed. The manager was to bow down thrice with his hands resting on the ground. Then he is to turn round the stage, keeping to the right as usual, perform the ceremony of Pradakṣiṇa, and take the jarjara from the hand of his companion and proceed five steps towards the instruments. Then turning round, he would bow to the lords of the quarters as well as Brahmā, Viṣṇu and Maheśvara.

After this a fourth man is to enter with flowers. He should worship jarjara, the instruments, and the manager; and then retire walking to the time of suitable music. Then the manager reads his Nāndī. He should say—

नमोऽस्तु सर्व्वदेवेभ्यो, द्विजातिभ्यः शुभं तथा ।
जितं सामेन वै राज्ञा, शिवं गोब्राह्मणाय च ॥
ब्रह्मोत्तरं तथैवास्तु हता ब्रह्मद्विषस्तथा ।
प्रशास्येमां महाराज एथिवीञ्च ससागराम् ॥
राष्ट्रं प्रवर्द्धतान्नैव रङ्गस्याप्या समृध्यतु।
प्रेक्षाकर्त्तृमहान् धर्म्मो भवतु ब्रह्मभावितः ॥
काव्यकर्त्तृयशश्चास्तु धर्म्माङ्गाणि प्रवर्द्धताम् ।
इज्यया चानया नित्यं प्रीयन्तां देवता इति ॥

There should be eight or twelve sentences.

At the end of each sentence, the companions are to say, एवं ह्यार्य्य ।

Then the instruments are to sound a note with eight pauses, and with nine long and six short and again three long aksaras. This was to indicate that the verse in honour of jarjara would have now to be read. That verse is now to

be recited with deep sound containing a hymn to the god intended for worship, and sentiments either of loyalty to the king or a reverence to Brāhmaṇas. At the end of this, another verse is to be recited for dismissing the jarjara and la ing it down. The two companions will move away and the manager holding the jarjara in balance will advance five steps with charming motion and read an Aryāślоka on love and move towards his companions. This is called Cāri. Then handing over jarjara to one of his companions, he is to move with quick and fierce steps with accompanying suitable music, and read a verse of fierce import. This is called Mahācāri. After the end of this he should talk with his companions. This talk is called Prarocanā or inducement. It should include an invitation to the audience to hear and see, and also give a summary of the subject-matter of the drama. And then he retired with his companions in the same way as he came.

The preliminaries should not be prolonged, for in that case both the actors and the audience would become tired, and if they are tired the drama will not be appreciated. After the departure of the manager with his companions, another man is to enter who is called Sthāpaka. He really ushers in the drama. He moves on the stage with charming gait, and praises the gods and the Brāhmaṇas in suitable terms, the music playing all the while in unison. He is to propitiate the audience, extol the poet, and indicate the beginning of the drama and then retire.

The preliminaries having been explained, the Munis asked Bharata to explain 'Rasa,' 'Bhāva,' 'Saṃgraha,' Kārikā and Nirukta. Bharata says that the dramatic art is so vast that it is impossible to explain it fully, as the fine arts required are infinite in number, and the Bhāvas, *i.e.*, sentiments (*lit* what happens or is caused to happen). are also infinite It is difficult to cross even one ocean of knowledge, not to say of the various oceans of knowledge. In the Sūtras and in Bhāṣya everything has been explained in detail. A short compilation is called a 'Saṃgraha'; Kārikās or mnemonic verses are those which closely following the Sūtras explain Rasa, Bhāva, acting, proprieties, harmony, tendencies, success, tunes, musical instruments, songs and theatricals. Nighaṇtu with Nigama is that which gives the technical terms, according to different schools, with meanings of their roots. The science which derives these technical terms from their roots, and explains how the technical meaning is arrived at, is called Nirukta. Then an entire Saṃgraha is given in which all the principal topics of the dramatic art are enumerated in 17 ślokas, after which comes this significant verse :—

एवमेषोऽत्र सूत्रार्थो निर्दिष्टो नाट्यसंग्रहः ।
अतः परं प्रवक्ष्यामि सूत्रग्रन्थविकल्पनम् ॥

This is a compilation of the dramatic art in which the meaning of the Sūtras is given in brief. After this I will speak of or expatiate upon the Sūtragrantha. Then commences a prose treatise in the proper Sūtra form with व्याख्यास्यामः and व्याख्यातः at every step. The word Sūtra here does not mean aphorisms only but a work written in Sūtra style like Kalpasūtras, Śrautasūtras, and others. In the prose treatise not only are Sūtras given but their Bhāṣya and a number of Kārikās. There are often derivations given of words from roots. So in this prose treatise imbedded in a long work in śloka metre, we have not only the Nāṭysūtras, but their Bhāṣya, Kārikā, Nighaṇtu and Nirukta also. This shows that there was a vast literature in the dramatic art before this long work in śloka-metre was compiled, and that literature had already undergone five or six different stages of development.

The first work of dramatic art pre-supposes the existence of a large number of dramas enacted in very early times, namely, the fall of the Asuras, the churning of the nectar from the sea, and the burning of the three cities, and so on. The first drama or Nātaka in its origin was not secular but connected with religion, the second was a Samavakāra, and the third Ḍima, a kind of drama in which supernatural elements predominated. The production of numerous dramas necessitated creation of dramatic art. Pāṇini speaks of Śilāli's Nātyasūtra and Kṛśāśva's Nātyasūtras. Indian tradition unfailingly points out Bharata as the first writer on the dramatic art as a Sūtrakāra. In the Nātyaśāstra too mention is made of various schools of Nātyasūtra (Siddhānta). This explains that all the three—Śilāli, Kṛśāśva and Bharata—were Sūtrakāras. In course of time the Sūtras themselves required explanation and expansion and so Bhāṣyas were written. Gradually the literature became bulky and it became necessary to write compendious treatises, mnemonic verses, and so on, till in the second century B.C. the whole of the vast literature was brought into a compendious harmony in what we now have as Bharata Nātyśāstra.

The author of the book.

This book which runs through 38 chapters is so full of technicalities, that it would take several years' study to master it completely. In the 28th chapter there is another Sūtra work, *i.e.*, on instrumental music; and there are altogether 7 chapters on music They are full of ancient technicalities very little understood in modern times and even by classical writers. The chapters on dress, selection of actors, classification of dramas, are equally difficult to understand. It has often been said in this work that whatever is useful to the world is useful to the dramatist and the actor. So all the arts of life in ancient times are faithfully reflected in this work, which makes it a hard nut to crack even for the antiquarian. The question is who compiled such a work? Some clue is given at the end. Bharata throughout

the work speaks in the first person. He makes mention of things terrestrial only, for he says men should not attempt to imitate the sentiments of the gods, and gods should be represented as men. But still he says that his art has its origin in heaven, and the Apsaras and gods and demigods were his only actors. But when these actors became experts they began to write plays on their own account, and the worst thing they did was to ridicule the Ṛṣis. The Ṛṣis in a rage cursed that they should be Śūdrācārī and their wicked knowledge wou'd perish. Bharata himself interfered and got the second curse withdrawn. But the first stood all the same.

A short time after Nahuṣa, a king of the lunar dynasty, conquered heaven and became very anxious to have a performance at his capital on earth. Bharata induced his actors much against their will to comply with the king's request. They came down, lived on earth for some time, and left a progeny behind whose hereditary profession was acting, and Kaūtilya in his Arthaśāstra classes them with Śūdras. The celestial actors went back to heaven and were freed from the curse by Bharata for their success in this art. Bharata did not himself come down; Kolāhala variously named Kohila and Kohala was the terrestrial teacher.

आत्मोपदेशसिद्धं हि नाट्यं प्रोक्तं स्वयम्भुवा ।
प्रेषं प्रस्तारतन्त्रेण कोलाहलः कथिष्यति ॥
प्रयोगान् कारिकाश्चैव निरुक्तानि तथैवच ।
अप्सरोभिरिदं सार्द्धं क्रीड़नीयैकहेतुकम् ॥
अधिष्ठितम् ।

Again

भरतानाञ्च वंशोऽयं भविष्यञ्च प्रवर्त्तितः ।
कोहेलादिभिरेवन्तु व्यासशाण्डिल्यधूर्त्ततैः ॥
मर्त्तव्यधर्म्मक्रियायुक्तैः किञ्चित्कालमवस्थितैः ।
एतच्छास्त्रं प्रणीतं हि नराणां बुद्धिवर्द्धनम् ॥

Bharata plainly attributes the authorship of the Śāstra, as opposed to the Sūtra, to Kohela Vatsya, Śāṇḍilya and Dhūrtita.

Geographical information.

The countries and the tribes mentioned in this book are :— (1) Kirāta, (2) Barbara, (3) Andhra, (4) Drabiḍa, (5) Kāśī-kośala, (6) Pulinda, and (7) Dākṣiṇātya, the inhabitants of which if represented in drama should be painted black. (1) The Śakas, (2) Yavanas, (3) Pāhravas, and (4) the Vāhlikas are to be painted white. The Pāñcālas, Sūrasenas,

Māhiṣas, Uḍramāgadhas, Aīgas, Vaīgas, and Kaliīgas are to be painted dark-white. The tribes mentioned in this connection all belong to ancient times. The Andhras and Kaliīgas are mentioned in Aśoka inscriptions. The Vaīgas are mentioned in connection with Buddha's life. The Pāīcālas, Sūrasenas are mentioned in the Brāhmaṇas. Sakas, Yavanas and Pahlavas in Manu.

Mountains and Countries.

In speaking of the dramatic tendency of the people of different countries, the Nāṭyaśāstra says that there are four tendencies, namely, Dākṣiṇātya, Āvanta, Uḍḍramāgadhi and Pañcālamadhyam. The people of Dakṣiṇāpatha, Kośala, Toṣala, Kaliīga, Moṣala, Draviḍa, Mahārāṣṭra, Vaniya, and Vanavasa are fond of Dākṣinātya tendencies. People of Avanti, Vidiśa, Saurāṣtra, Mālava, Sindhu, Sauvīra, Ānarta, Arvada Daśārṇa and Mṛttika are fond of the Avanti tendencies. The people of Aīga, Vaīga and Kaliīga Vatsa, Udra Magadha, Pauṇḍra, Nepāla, Antargiri, Vahirgiri, Malaca, Mallavarṣaka, Bramhottra, Bhārgava, Mārgava, Prāgjyotiṣa, Pulinda, Vidāha, Tāmralipta, Prāga and Praviti are fond of Uḍḍramāgadhi tendencies. The Pañcālās, Saurasenas, Kāśmīras, Hastināpauras, Vāhlikas, Śākalas, Madras, Kauṣinaras, and the people of the tract to the north of the Ganges in the Himalayas are fond of Pāñcalamadhyama tendencies.

The countries mentioned here are all ancient countries. Dakṣisāpatha is mentioned in the Kalpasūtras. Kosalas are mentioned in the Brāhmaṇas, Toṣalas and Kaliīgas are mentioned in Aśoka inscriptions. Draviḍa is simply a transformation of Dravila or Sāmila mentioned by Solomon in the 10th century B.C. Andhras and Rattas, the Prakrita form of Mahārāṣtra, are mentioned in the Aśoka inscriptions. In this way all the names are old, with the exception of three or four which are altogether new.

Language.

In enumerating languages, specially the Prākṛta, the following seven are mentioned as Bhāṣā: (1) Māgadhī, (2) Avantija, (3) Prāgyā, (4) Suraseni, (5) Ardha Māgadhī, (6) Bāhlikā, (7) Dākṣiṇātya; and the following are Vibhāsās: (1) Savārī, (2) Aviri, (3) Chāndāli, (4) Sākâri, (5) Draviḍi, (5) Uddharaja. That the latter dialects were not of Sanskritic origin was known in those ancient times, but latterly Karṇaṭī, Drāviḍī and other languages of the south were included in the Prākṛts. Here is another sign that the book is very ancient.

न वर्व्वरकिरातान्ध्रद्रविड़ाद्यासुजातिषु
नाट्ययोगे तु कर्त्तव्यं काव्यं भाषासमाश्रयम् ॥

That is, their languages were unintelligible to the Indian public.

The geography of this book shows its antiquity, and the distribution of its languages too shows its antiquity.

The Indian drama is connected with the raising of the flagstaff of Indra. The Jarjara in fact is the emblem of Indian drama, and it represents the flagstaff of Indra. The raising of the flagstaff seems to have been an ancient survival of a still more ancient ceremony widely prevalent all over the world. This is what is called the May-pole in England. After the winter is over and the fair weather sets in, the village people of various parts of Europe assemble together, go into a forest, cut down a live oak tree and bring it in triumphal procession to their villages, as an emblem of newly budding life. They erect it in a public place, decorate it according to their fancies, and pass the day in merrymaking. Sometimes the tree stands there for two or three years. But every year it is newly decorated at the advent of the summer. In that case the real significance of the ceremony is lost, and is merely a survival. In India the rainy season is one of the most melancholy of the seasons. As soon as the rains were over, the Indians of old raised a pole in front of the king's palace and called it the flagstaff of Indra. The original meaning of bringing in new life was perhaps forgotten and the new meaning was given to it. Indra triumphed over the Asuras, that is, cloud, and brought in brilliant weather, making heaven his abode visible, and so they raised a flagstaff in token of his victory. The merrymaking continued all the same, developing dramatic literature in the plain of India and grotesque masquerading in Nepal. The ceremony of Indrayātra is still the principal ceremony in Nepal. No flagstaff is raised, but images of Indra are made with outstretched hands, reminding people of the flagstaff. So drama in India is connected with a very ancient ceremony, call it Indian or even Indo-Aryan, but it has nothing to do with the later Greeks.

32. The Secretion of *Phromnia marginella*, Olivier.

By David Hooper.

The Ghost Bug, which yields a white sugary secretion in India, has been known by various names. It is the *Cigale phalenoideverte*, described and figured in the year 1791 by Stoll (*Cigal*, p. 50, pt. ii, fig. 54). It was quoted in 1791 by Olivier (*Encyclop. Meth. Ins.* vi, p. 575, No. 43) under the name of *Fulgora marginella*. In 1862 it was described by Stal (*Ofvers K. Sv. Akad.* Stockholm, xix, p. 490) under the name of *Phromnia marginella*. Major-General T. Hardwick describes and figures (*Asiatic Researches*, vol. xiv, 1822, p. 182) an insect under the name of *Chermes mannifer*, which is probably identical with *Phromnia marginella*. But by far the best account of the insect is given in our journal (*Journ. Asiatic Soc. Beng.*, vol. xii (1843), p. 898) where the name attributed to the species is *Flata limbata*. Other references to the Ghost Bug may be found in *Journ. Agri. Hort. Soc. India*, vol. vi (1879), p. xix; vi (1879), p. xli; *Indian Museum Notes*, 11, 39, 92, 95, 166; iv, 42. Watt and Mann, *Pests and Blights of the Tea Plant*, p. 292.

Phromnia marginella is found generally in North East India. In the collection of the Indian Museum there are representatives of the species from Dehra Dun, Almora, Sikkim, Naga Hills. The author of the volume on Rhynchota, in the Fauna of British India, received them from Ceylon, Cachar, Margherita (Assam), Tavoy and Siam. Mr. W. P. Thomas, in February 1889, found the insects in the Narsingpur District of the Central Provinces; while Mr. R. H. E. Thompson found them in the warmer valleys of the North-Western Himalayas and also at elevations ranging from a thousand to fifteen hundred feet above sea level in the forest-clad country of the Central Provinces to the south of the river Ganges. They affect various trees—Major-General Hardwick records their presence in Pachmarhi on a climbing species of *Celastrus*. In the Central Provinces they have been discovered upon green succulent coppice shoots of *Elaeodendron glaucum*, Pers. Dr. H. H. Mann has noticed that in Assam they are partial to *Grevillea robusta* and are occasionally found on tea bushes. It is possible that the white secretion is afforded by other species, *e.g.*, *P. tricolor*, White, *P. vividula*, Atkins, and *P. inornata*, Wlk., and probably from other genera of the Fulgoridæ, *e.g.*, *Pyrops*, *Fulgora*, and *Euphria*.

According to Captain Hutton the eggs hatch in December, and the larvæ cluster like sheep upon the food plant. In Garhwal the insects are called Dhaberi (sheep) on account of their habit of clustering together and jumping away when disturbed. They feed by sucking up the juices of the leaves, and moult several times, gradually increasing in size until the setting in of the rainy season in June, when winged imagos begin to emerge. In the imago the front wings are grass-green with anterior margins red (hence the specific name), the posterior wings are milk-white, the body is greenish, and the abdomen is generally covered up with white flocculent or filamentous matter similar to what is found upon the larvæ. The eggs are laid in considerable number in the bark of the twigs, a slight swelling of the wood often taking place where the eggs have been laid. The imagos move but little from the food plant and often live on until their eggs have hatched in the cold weather. The larvæ, and to a less extent the imagos, are covered with masses of white flocculent matter which is thought to be secreted by small glands distributed over the abdomen, and opening by minute pores in the integument. The sugary matter is said to be excreted in a liquid state by the larvæ, and drops on to the leaves where it hardens and gives the bushes the appearance of having been frosted or whitewashed. Little is known of the method of its origin, but it is likely to be secreted by the large gland-like organs which are situated on either side at the extremity of the abdomen of the larva.

There is evidence that the insects feed upon the plant juices and excrete it on the leaves, notwithstanding the supposition of one observer that the sugar comes from the atmosphere. Dr. Annandale, in a recent number of *Records of Indian Museum* (vol. iii, p iii, 293) remarks that a certain Jassid buries its proboscis in the leaf of a *Ficus* to suck up the sap, while from the tip of the abdomen it squirts out a honey-like liquid.

The sugary deposit on the branches and leaves is a manna-like substance of a pure white colour. It occurs in grains of various sizes, or forms thick incrustations on and around the organs of the plant. It is sweet to the taste, and may be moulded like wax into balls. On account of its outward resemblance to wax it has occasionally been considered to be a form of the white wax of China, but Captain Hutton in 1843 examined the deposit and concluded that it was a species of manna as it had the taste and properties of that substance. Being soluble in water the deposit is washed off the bushes in the rains, and it is only obtainable throughout the dry weather from January to June. The secretion does not appear to be generally used. In Garhwal the natives are said to eat it, but the Koorkoos of the Central Provinces who know the insect

make no use of the deposit, which they say has a narcotic effect when eaten.

In April of this year Mr. Norman Gill, Superintendent of the Kumaon Government Gardens, forwarded to the Reporter on Economic Products some branches and leaves of a tree covered with white incrustation, together with a sample of the 'wax.' The wax was prepared by dissolving the white deposits in water, straining and evaporating, and had the consistence of toffee. It was remarked that from one to two pounds of this substance could be obtained from each infected tree. It was required to know if the supposed wax had any economic value. Mr. Gill observed that the insects adapted themselves to one kind of tree of a deciduous nature, and in April it was thickly covered with the insects and their secretion, giving it the appearance of being covered with snow. The tree was identified as *Elœodendron glaucum*, Pers., which appeared to be the chief host plant in the district. Some of the insects fell from the tree and colonised on the undergrowth below, more particularly on *Vitex Negundo*. The moths are found near the colonies, both on the tree above and on the bushes below, in various stages of development. The white, ragged-looking "jumpers" become stationary after a time, and moult as moths, leaving their cases attached to the leaves and branches. The effect of the insects attacking the trees was observed to reduce their healthiness and vigour of growth.

The solidified secretion prepared and sent from Kumaon was soluble in a small amount of boiling water, and the solution on cooling deposited hard, white and transparent crystals. The crystals were neutral in reaction, inodorous, and had a slight sweetish taste. They melted at 186°C., and when ignited they burnt with the odour of caramel, leaving no ash. They dissolved in about 12 parts of water at 28°C. (8·7 per cent.), and in $2\frac{1}{2}$ parts of boiling water (40 per cent.). They were scarcely soluble in alcohol even on boiling. The solution had no reducing effect on Fehling's test even after prolonged boiling with dilute acid. A combustion of the sugar afforded 39·3 per cent. Carbon, 7·7 per cent. Hydrogen, and 53 per cent. Oxygen. The body is therefore dulcitol (dulcite), an isomeride of mannitol (mannite), $C_6 H_{14} O_6$

The occurrence of dulcitol in the secretion of *Phromnia marginella* leads to an enquiry for the source of this peculiar sugar. The food-plants of *Phromnia* have been traced to *Elœodendron glaucum* and a climbing species of *Celastrus*, both belonging to the natural order *Celastrineæ*. In a paper on the distribution of mannitol and dulcitol in plants written by A. N. Monteverde in 1894 (*Ann. Agrom.*, 19,444) the author reports the detection of dulcitol in several species of *Celastrineæ*. The examination of 797 species of *Scrophularineæ* showed that mannitol is present in 272 and dulcitol in 26

species. He also found dulcitol abundant in *Euonymus Europæus* at the budding stage, but absent in winter. He was of opinion that these two Carbohydrates were plastic substances resulting from the transformation of sugar, and that one or other was a constant character of some natural orders. Naylor and Chaplin in 1889 found dulcitol in the bark of *E. atropurpureus*, Jacq., and this was confirmed by M. Hoehnel (*Chem. Centr.* 1900, 1,869). The presence of a similar sweet constituent was indicated in the barks of *E. crenulatus*, Wall., and *E. pendulus*, Wall., in an examination made by myself twenty years ago. The honey-like exudation at the extremities of the branches of *E. japonicus* Linn., due to the punctures of insects, deposits crystals which L. Maquenne (*Bull. Soc. Chim.*, 1899, 111, 21,1082) proved to be dulcitol. It is thus very evident that the *Phromnias* feed upon plants with a sap charged with a special sugar which they proceed to deposit on the leaves and the bark in an almost pure condition.

These observations are of value in enabling us to solve some difficulties hitherto connected with the origin of certain manna-like incrustations that have come to me for identification. In 1902 a specimen of gum of *Elæodendron glaucum* was sent to the Indian Museum by the Conservator of Forests, Dehra Dun. The so-called "gum" was a milk-white substance mixed with portions of leaves and other impurities. Crystals were separated from the specimen which had a sweet taste and a high melting point. There is not much doubt that the "gum" was the secretion of a species of *Phromnia*. In 1890 a sample of manna from an unknown botanical source in the Central Provinces was sent to me by Dr. W. Dymock of Bombay. It was in whitish masses with a stratified crystalline fracture, sweetish to the taste, with an odour of ordinary manna. Some hard white crystals were separated from its solution in hot water which resembled mannitol, except that they were not so soluble in water and had a higher melting point. Its chemical composition was therefore different to that of all the known Indian mannas. In the light of the present investigation the substance was most probably a deposit formed by insects of the *Phromnia* class.

It is interesting to observe in conclusion that the substance known as dulcite (now called dulcitol) was first obtained from a concrete sugar or manna sent to Paris from Madagascar in 1848. The origin of the sample was quite unknown. It is not improbable that it was a saccharine deposit formed by insect agency such as that dealt with in this paper.

33. Note on Seven Sixteenth Century Cannon recently discovered in the Dacca District.

By H. E. Stapleton, *Inspector of Schools, Dacca Division.*

On February 12th, 1909, seven brass cannon were discovered by some men who were excavating earth in the small village of Dīwān Bāgh, or, as it is written on the 1″=1 mile Survey map, Munnoohur Khaner Bagh. The village is situated about seven miles north-east of Narainganj, near the junction of a streamlet called the Akātia Khāl with the Sītal Lākhyā, and was formerly the residence of Munawwar Khān, the great-grandson of the 'Isā Khān, whose name is borne on one of the cannon. The present owner of the land is Maulvi Muẓaffar Ḥusain. The find was reported to the Sub-Divisional Officer of Narainganj, and, on the cannon being brought to Dacca, they were handed over to me for description by Mr. S. E. Stinton, the present Magistrate of Dacca.

The appearance of the cannon will be evident from the annexed photo (Plate XXV). Four have muzzles shaped like a lion or tiger's head, probably in compliment to the king whose name is found engraved on the first one—Sher Shāh, the conqueror of Humāyūn. Their date is certain from the inscription given on the same cannon, which shows that it was cast in the year 949 A.H. (=1542 A.D.). Of the remaining three, the first bears the name of 'Isā Khān, ruler of Eastern Bengal in the last quarter of the sixteenth century, with the date 1002 A.H. (=1593 A.D.). The second bears some family resemblance to the cannon of 'Isā Khān, and may date from the same period. The last of the seven has no inscription by which the date could be fixed, and nothing but its discovery with the other cannon would enable us to say to what period it belonged.

The cannon vary in length from 3ft. 10 in. to 5ft. 1 inch, and in weight from 1 to 2 maunds. They were probably used on ships of war (the *nuwwārah*), but the gun bearing the name of 'Isā Khān is handy enough to serve as an elephant-gun. Their method of mounting is shown by the remains of the iron forks that still clasp the trunnions of two of the guns. This would permit only of motion up and down in a vertical plane, but the block of wood that carried the prong might in turn have been able to rotate on a vertical axis, thus giving the gun a horizontal motion as well. The butt of each gun was cast with a socket, into which a long handle or rod of iron was fitted to facilitate the aiming of the gun.

The following is a detailed account of the guns and all inscriptions that are to be found on them, taking the guns in the order from left to right in which they are arranged in the photo.

I. Tiger-mouthed, with ornamental band round the tiger's neck, and another 6 inches behind. Similar ornamental bands also occur at the breech and the trunnions.

The main inscription on this gun (*vide* Plate XXVI) is specially interesting, both because a date is given, and also for the information afforded by it regarding the arsenal assistants employed by Sher Shāh. If Sher Shāh thus employed natives of Asia Minor or Turkey to improve the make of his guns, it seems possible that the marked improvement that occurred in the coinage during his reign may also have originated from the West.

The main inscription, which is $1\frac{5}{8}$ inches broad, and occupies the entire upper portion between the backsight and muzzle of the gun, runs as follows :—

در عهد بادشاه عادل شیر شاه خلد الله ملکه و سلطانه در تاریخ نهصد چهل نه عمل سید احمد رومي *

شیر شاه عادلے کاندر جهان * نام نکویش بماند جاودان

"In the time of the Just King Sher Shāh—May God perpetuate his kingdom and rule!—Saiyid Aḥmad Rūmī wrought (this cannon) in the year 949.

"Sher Shāh, who is just in the world,
May his good name continue for ever."

The date shows that the gun was cast in the next year after Sher Shāh had deposed Khizr Khān—the first Governor of Bengal after Sher Shāh had reconquered Gaur in 946 (1539 A.D.)—and divided up Bengal into districts, each under an Amīr, with Qāzī Fazīlat as Amīn (*vide* Blochmann, *History and Geography of Bengal*, III, *J.A.S.B.*, 1875, p. 295). The disciplinary measures taken against Khizr Khān probably account for the absence of any ruler's name in the inscription, save that of the Pādshāh himself.

Immediately behind the backsight occur the figures ৩।৪, the present Bengali method of writing 3 maunds and 14 seers, and behind this again is a ☒ mark at the extreme end of the socket. On the lower side of the gun are found three inscriptions. The first, below the muzzle, is scratched in Persian *shikast*, and gives either the name of the gunner or a subsequent owner, *Rif'at Ghāzī* رفعت غازي. Another ☒ mark also is seen here, just above the name. At the other end, below the breech. is found in Bengali the name *Tarap Rājā*. This may be taken as the name of the gun, and possibly has reference to some expedition during the sixteenth century into South Sylhet, of which Taraf is an important perganah. The fort at Jangalbārī (in the present

Kishoreganj Sub-Division of Mymensingh) which 'Isā Khān captured from the Kochs about the year 1585 and where his descendants still reside, is not far west of Taraf.[1]

Just beyond the words Tarap Rājā, but upside down, are found the figures ২।৬, or, in other words, 2 maunds 16 seers. Neither this weight, however, nor the one near the backsight, correspond at all with the actual present weight of the gun, which is only 1 maund 27 seers. The length of the gun, from the extreme front of the muzzle to the end of the brass socket at the breech, is 4ft. 9 inches, and its bore is $1\frac{3}{4}$ inches in diameter. The circumference of the gun immediately behind the tiger's head is $9\frac{1}{4}$ ins., while just in front of the backsight it is 1 ft. $\frac{1}{4}$ in.[2]

II and III. Tiger-headed guns of similar make to the first, but differing slightly in details of the tiger's head, the position of the front band, and the length of the socket at the breech. No. II, which weighs 1 maund $30\frac{1}{4}$ seers and has a bore of $1\frac{3}{4}$ inches, has nothing inscribed on it beyond a mark ৶ 6 inches behind the foresight, which is just visible in the plate. No. III, the weight of which is 1 maund $36\frac{1}{2}$ seers (including the fork at the trunnions), has a bore 2 inches in diameter and is 5 ft. 2 inches long. Of the inscriptions the most interesting is the name of a previously unknown Governor, *Sirkār Ma'būd Khān*, سرکار معبود خان scratched in Persian *shikast* just behind the foresight. On the top, just behind the trunnions, is found the number ১০ (10), probably the number of the gun, while on the right-hand side, halfway between the breech and trunnions, occur the Bengali numbers ২।৬, *i.e.*, 2 maunds 16 seers. It is difficult to offer any very satisfactory explanation for the discrepancies between the present weights of these guns and those recorded on them by the original owners, but if (following Thomas' *Chronicles*, p. 430) we take the Sher Shāh maund to be 51·8 lbs. avoirdupois (*i.e.* $\frac{28}{30}$ of Akbar's maund of 55·5 lbs.), a fair approxima-

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[1] It even seems possible that 'Isā Khān enlisted the aid of the Tipperas against the Imperialists under Shāhbāz Khān (*vide* account of cannon No. V. later), as Long in his analysis of the Tippera *Rājmālā* (*J.A.S.B.*, 1850, p. 549) states that when the Muhammadans invaded Tippera in 1587 the victorious commander of the Tippera troops was called "Issah-Khan." The Rājā Amar Māṇikya, in whose reign this occurred, had previously (c. 1580) waged war against the Zemindar of Taraf, and brought his son captive in a cage to Udāyāpūr, the then Capital of Tippera.

[2] An analysis of the metal of which this cannon is composed was made at my request by Bābu Phani Bhūshaṇ Mukerjī, a pupil of Prof. Watson of the Dacca College, with the following result :—

Cu	..	84·72%
Zn and Fe	..	13·32%
Sn	..	1·83%
TOTAL	..	99·87%

tion of the recorded to the present actual weights is obtained, as may be seen from the following table :—

No. of cannon.	Weight.		
	Recorded.	Calculated.	Observed.
I	(3·14)	...	...
III	2·16	1·22	1·27
IV	2·16	1·22	1·36½ (with trunnion support.)
	2·28½	1·30	1·20¾

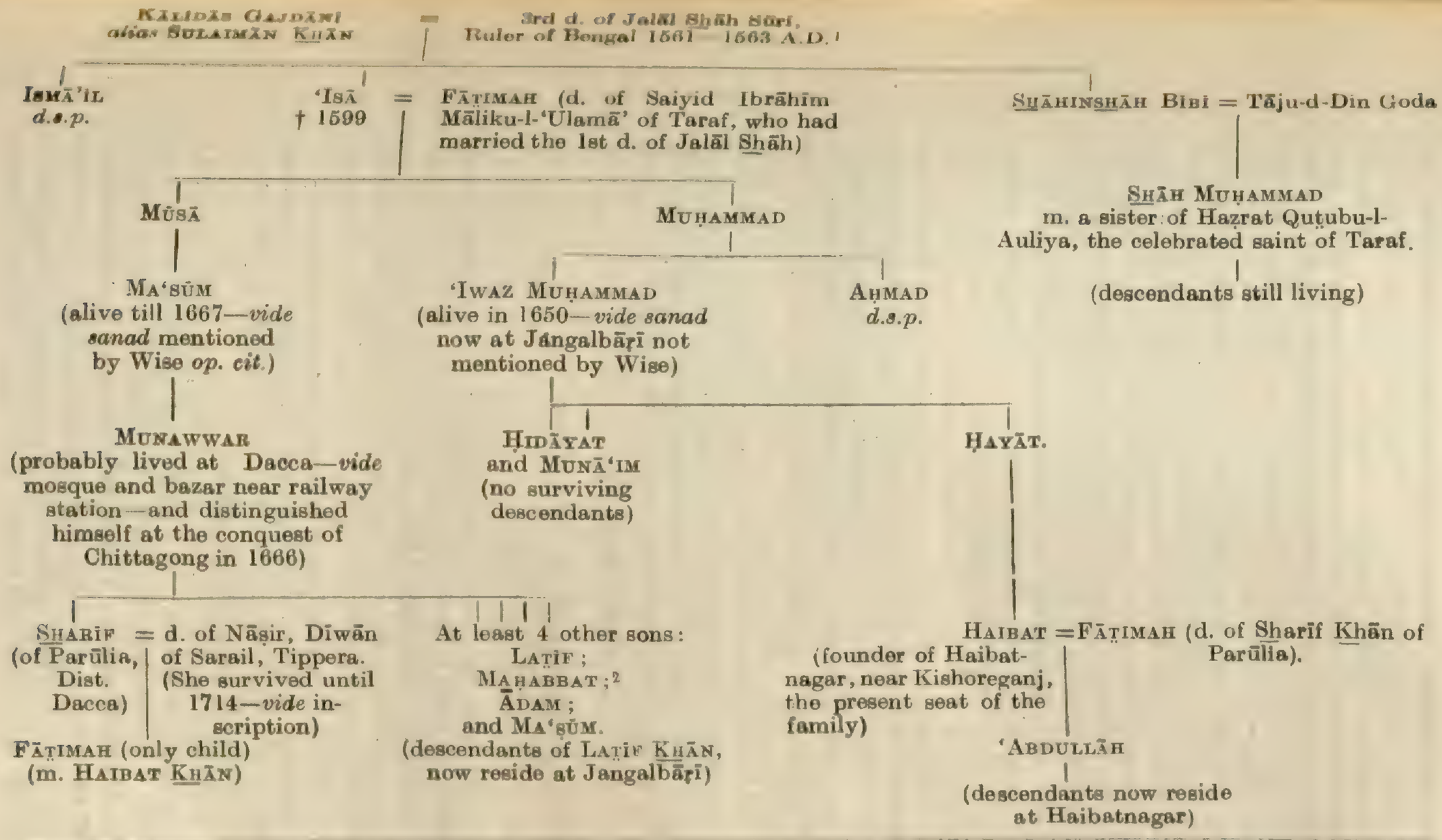
IV. Tiger-headed, differing slightly from the previous three guns in having no ring between the trunnions and muzzle, and from the thicker socket at the breech. It is 4 ft. 8 in. long, and has a bore 1¾ inches in diameter.

The only inscription found on it occurs just before the trunnions, and runs as follows :—নি ৩৯১ ২৷৷৮৷৷. What the first half of the inscription means is not clear, but the number 391 apparently indicates the number of the gun. The other figures certainly stand for 2 mds. 28½ seers. The actual weight, however, is only 1 maund 20¾ seers.

V. This cannon is the second most important in the find as it bears a Bengali inscription over 300 years old, showing the gun was cast in the year of the invasion of Eastern Bengal by Mān Singh, the General of Akbar, who had been deputed by his sovereign to subjugate the contumacious Governor, 'Isā Khān, whose name also appears on the cannon. A full description of 'Isā Khān and his family by Dr. J. Wise of Dacca will be found on pp. 209-214 of the *Journal of the Asiatic Society of Bengal* for 1874, to which reference may be made. The pedigree on the following page epitomises the information we possess regarding 'Isā Khān and his immediate ancestors and descendants.

'Isā Khān, the son of a converted Bais Rājput from Oudh,[1] was the chief of the Twelve Bhuiyas, or zemindars of Eastern

[1] Mr. R. Burn, C.S., Deputy Commissioner, Gonda, to whom I referred the question of Kālīdās Gajdānī's ancestry, suggests that he was a Bais Rājput of Baiswārā (*vide* article under that head in the *Imperial Gazetteer*, VI, p. 218). This is curiously confirmed by the note given at the bottom of p. 1 of the *Itihās*. মোসেমান খাঁর পূর্ব্বপুরুষগণের আদিবাসস্থান অযোধ্যাপ্রদেশান্তর্গত বয়েস ও বারা রাজ্য। "*Bais* and *Yārā*" written without spaces on either side of the ও is simply *Baiswārā*. The name 'Baiswārā' has apparently reference to the 22 parganahs held by these Rājputs, and the fact that 'Isā Khān was also granted the same number of parganahs in Eastern Bengal may be regarded as some actual proof of his descent from the Rājputs of Baiswārā. (15-8-09).



[1] The other version (given by Dr. Wise) that Sulaimān married a daughter of Sulṭān Ḥusain Shāh of Bengal is improbable from the date of that ruler (1493-1520). The pedigree follows the statements made in the *Masnad Ālī Itihās* (History of the Musnad-i-'Alī) compiled by Munshi Rāj Chandra Ghosh and Pandit Kālā Kumār Chakravartī and published by the family at Dacca in 1298 B.S. (1891 A.D.). Kālīdās is said to have been minister to Bahādur Shāh Sūrī, Jalāl Shāh's elder brother, who ruled Bengal from 1555—1561, and to owe his name Gajdānī to his generosity in giving away daily a gold elephant as alms. Jalāl Shāh's third daughter is said to have married Kālāpahār, the celebrated general of Sulaimān Kararānī, the next ruler of Bengal (1564—1572). The writers of the *Itihās* make some attempt to identify the latter ruler with Kālīdās Gajdānī. (15-8-09)

[2] There is a parganah Maḥabbatpūr in the Dacca district which is probably called after this son of Munawwar Khān. It is now practically represented by the Char in the River Padma immediately to the south of Rājābāṛī, where the Padma joins the Meghnā. (15-8-09)

Bengal, in the interval between the death of Dā'ūd Shāh, the last independent king of Bengal in 1576, and the reconquest of Eastern Bengal and Orissa by Mān Singh in 1593. From the *'Ain* we gather that 'Isā Khān successfully withstood the previous invasion of the Imperialist General Shāhbāz Khān in 1585, and Ralph Fitch who visited Sunārgāṅw in 1586 records that "the Chief King of all these Countries is called Isacan and he is the chief of all the other kings." 'Isā Khān remained in a semi-independent state until 1593, when Mān Singh was sent to Bengal to bring the country thoroughly under the Imperial sway. After establishing his base at Sherpūr Mūrcha in Bogra, he marched east across country and began to besiege 'Isā Khān's fort at Egāro Sindhu, a strategic position on the boundary of Mymensingh and Dacca, at the point where the Banār river breaks off west from the Brahmaputra. A personal combat between 'Isā Khān and Mān Singh ensued, which ended in 'Isā Khān sparing the life of Mān Singh, and the two rivals becoming firm friends. 'Isā Khān accompanied Mān Singh back to Āgra, where he was at first thrown into prison. Later, when the Emperor heard the story of the fight at Egāro Sindhu, he conferred on 'Isā Khān the titles of Dīwān and Masnad-i-'Alī, and granted him for support 22 parganahs in Mymensingh and Dacca.

The inscription given below (though the reading of the first half of the second line—*vide* Plate XXVII—is unsatisfactory) sufficiently confirms the family tradition that 'Isā Khān only obtained his titles after the struggle with Mān Singh.

সবকার শ্রীযুত ইছা খাঁ

? (বমসনদী ফি) মন হীজার

১০০২

"The high-born Governor 'Isā Khān on the *Masnad* in the year of the Hijra 1002 (=1593 A.D.)."

The inscription measures $3\frac{1}{2}''$ by 2."

The gun differs widely in appearance from the previous cannon as besides being polygonal in shape, the barrel and socket are ornamented by bands throughout their length, while near the muzzle the gun is decorated by longitudinal ridges, 4 inches long. The diameter of the bore is $1\frac{1}{8}''$, and the length of the gun is 3′ 11." Its weight is 1 maund $2\frac{1}{2}$ seers.

VI. A similar gun to No. V but stouter, and with a round, instead of polygonal barrel. The length of the gun is the same in both cases, but the bore measures $1\frac{3}{4}$ inches, and the weight of the gun is 1 maund 7 seers. The inscriptions are as follows :—

(*a*) At the top, just in front of the backsight, occur the figures ৪ + ১২৬ (?4 + 126), while near the foresight, between the first two bands, are found the figures ১॥৩, *i.e.*, 1 maund 23 seers.

(*b*) Below, midway between the breech and trunnions, occurs the lettering

سعا يا ر

إعجرز

What this inscription means is not clear.[1]

Further down the gun, just past the trunnions, are also found some doubtful figures (faintly visible in the plate). These somewhat resemble in form the English figures 3 1 9—1, though the loop of the 9 is incomplete.

VII. A plain gun, devoid both of ornamentation and inscription. Its length is 4′ 6″, and the diameter of its bore 1$\frac{3}{4}$″. The weight of the gun is 1 maund 30 seers.

Addenda.

Little trace now remains of the fort at Egāro Sindhu (এগার সিন্ধু, the junction of 11 streams) except a few mounds which indicate the lines of fortification. The only object of interest is a small three-domed mosque richly decorated within and without with ornamental bricks. Above the central door is an inscription in plaster dating from the time of 'Isā Khān's grandson, Ma'ṣūm Khān.

As the letters of the inscription are rapidly peeling off under the influence of the weather, I take the opportunity of recording it here.

لا اله الا الله محمد رسول الله - قال الله تعالى انما يعمر مساجد الله من آمن بالله واليوم الاخر . و قال النبي عليه السلام من بني مسجدا بني الله له ستين بيتا فى الجنه - سر انجام تعمير ... بتوفيق حق سبحانه تعالى - باهتمام سعدي ابن شيخ شيرو در عهد سلطنت تاج فخر سلاطين ... ...] صاحب] قران ثاني شاه جهان بادشاه غازي در شهر ربيع الاول سنه ١٠٦٢ هجري *

"There is no God but Allāh! Muḥammad is the prophet of Allāh! Saith Almighty God, "Verily he builds mosques

[1] M. Tabārakullāh, late Maulvi of the Dacca Madrasah, to whom the inscription was shown, suggests يا ستّار, "O Concealer (of my sins)." and يا عزيز, "O Beloved," two of the names of Allah. Apart from the unlikelihood of such an inscription on a weapon of war, there is no sign of the يا in the second line, and the first two curves of the س in the first line are very doubtful. The dots of the يا in the first line are also not certain. (15-8-09)

for Allāh who believes in Allāh and the last day.'' Saith the Prophet,—Peace be on him ! '' He who builds a mosque, Allāh will build for him sixty houses in Paradise.''

''The completion of the building (is) by the help of God the Holy and Almighty. [This mosque was erected] through the exertion of Sa'dī son of Shaikh Shīrū in the reign of the Crown of the Glory of Sultans, the second [Ṣāḥib-i-]Qirān, Pādshāh Ghāzī Shāh Jahān, in the month Rabī'u-l-Awwal, in the year 1062 A.H.''

The few words that are missing are those which fall at the beginning or end of the last three lines, where a large portion of the plaster has fallen off. The area covered by the inscription measures 1 ft. 6 inches by 1 ft. $10\frac{1}{4}$ inches. The local people can say nothing about the builder of the mosque, but his grave is found a few paces off to the south-east.

Soon after this paper was read before the Society I was also able to obtain, through the efforts of M. Tasadduq Aḥmad, Deputy Inspector of Schools, Narainganj, a verified rubbing of another inscription relating to the Dīwān family. This is the one engraved on a basalt slab over the main entrance of a large three-domed mosque at Parūlia in the Dacca District, a place which was formerly on the main stream of the Brahmaputra, when this river traversed the country between the present courses of the Lākhyā and Meghnā. Parūlia is 3 miles in a straight line from Pulāsh Hāṭ on the Lākhyā, and 5 from Narsinghdī on the Meghnā, and the mosque is built on the western bank of the depression that marks the old course of the river Brahmaputra. A little to the N.-W. is the brick mausoleum containing the tombs of Sharīf Khān and his nameless wife.

The inscription, which measures 2′ 6″ by 1′ 1′, runs as follows :—

یا فتاح لا اله الا الله محمد رسول الله یا فتاح

کرده زینت بنت ناصر زوجهٔ دیوان شریف
مسجد عالي بنا چون گنبد اخضر ظریف
سال تاریخش بگفتا هاتف از روی شمار
یکهزار و یکصد و بیست و شش از هجر النظیف

'O Opener!'' The Kalimah "O Opener!" (*i.e.*, Solver of Difficulties.)

"Adorned by the daughter of Nāṣir, the wife of Dīwān Sharif, (This) great mosque was built like the graceful blue dome (of the sky). Hātif [*i.e.*, the angel of the unseen world] spoke the year of its date from calculation, Eleven Hundred and twenty-six of the holy Hijra.''

From page 17 of the *Masnad Ali Itihās* (the history of the

family previously referred to) we learn that the lady was the daughter of one of the Dīwāns of Sarail in Tippera, and that Sharīf Khān and his wife had only one child, named Fāṭimah. This girl was married to Haibat Khān, who was fourth in descent from ʻIsā Khān, through his younger son Muḥammad, and on the death of her parents the parganahs of Maheswārdī, Singhadā and Darzī Bāzū passed into the possession of the Haibatnagar branch of the family. Parūlia is still owned by the Haibatnagar Zemindars, but no member of the family resides there. From the fact, however, that the place is marked on the 1″ to the mile map as Dīwān Khudā Niwāz Khān's House it appears likely that it was still a family seat in the middle of the last century, when the Survey map was made. Dīwān Khudā Niwāz Khān was a great-great-great-grandson of Haibat Khān and according to the *Itihās* died in 1266 B.S. (=1859 A.D.) at Dacca. The only respectable inhabitants of Parūlia at present are some Brahmins who probably owe their lands to the generosity of some Dīwān. Though strict Muhammadans, the family have ever shown by their lavish gifts to Brahmins that they venerate the memory of their Hindu ancestor, Kālīdās Gajdānī.

34. NUMISMATIC SUPPLEMENT No. XII.

Note.—**The numeration of the article below is continued from p. 307 of the "Journal and Proceedings" for 1909.**

71. Salīmī Coins.[1]

Dr. Taylor will not allow that any of these coins were struck during the reign of Akbar. But surely the fact that some of them bear the regnal date 50 is evidence that they were coined during Akbar's lifetime, or at least before the news of his death had reached Aḥmadābād. If the date 50 means anything, it must mean that Akbar was alive, or was supposed to be alive. And does not the fact that some of them were coined in Ābān support this view? For though Akbar died early in that month—apparently on the 10th—the news of his death could hardly have reached Aḥmedabad till Āẕar. It is true that Akbar once rode and drove to Gujarāt from Fatḥpūr Sīkrī, 23 miles west of Agra, in nine days and nights, but this was always regarded as a wonderful feat, and was described by Jahāngīr as the accomplishment in a fortnight of a journey of two months (Akbar went by Deesa and the vicinity of Pattan—presumably the best route—and did not reach Aḥmadābād under a fortnight). The distance of Aḥmadābād from Agra was popularly reckoned as 400 kos, or 800 miles, though as the crow flies, it is only about 450 miles. Moreover, Jahāngīr did not ascend the throne till eight days after his father's death, or about 18 Ābān, and it will hardly be contended that he issued orders about coinage before his enthronement. He himself describes in his Memoirs how after his accession he gave elaborate orders on the subject. The mint master of Aḥmadābād could, I submit, hardly have known of Akbar's death till Āẕar, and still less could he have known in Ābān who was to succeed Akbar, for there was a plot to raise Khusrau to the throne, and no doubt this was one reason why the enthronement was delayed.

Dr. Taylor doubts if Jahāngīr ever had political power in Gujarāt, but the M'āsiru-l-Umarā, which says Gujarāt was given to him in fief, is pretty good authority, and it agrees with the statement in the Mirāt Ahmadi, p. 193 of lithograph of 1889, that in 1011 (1602-03) Prince Salīm was assigned an annual income of a lac of rupees out of the revenues of Cambay. Dr.

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[1] See Num. Supp. I, art. 5, J.A.S.B., May 1908, and Num. Supp. X, art. 59.

Taylor says that Salim's holding Gujarat in fief would not have entitled him to issue coins in his own name. But the point is not what he was entitled to do, but what he had facilities for doing, supposing that he was acting as a rebel.

Here I would remark that Dr. Taylor has much underestimated the extent of Jahāngīr's rebellion. He twice over speaks of it as short-lived and as confined, apparently, to Allahabad. On the contrary it lasted for years, and was accompanied by such incidents as Jahāngīr's march from Allahābād to Etāwah with thirty thousand cavalry, and his murder of his father's minister, Abu'l Faẓl. It certainly extended to Jaunpūr and Bihār, and there is every probability that when Jahāngīr's servants went off to Gujarāt, as the M'āsiru-l-Umarā tells us they did, they fomented the agitation there. Manucci is too late and too much of a gossip to be an authority on the subject. If Dr. Taylor would read the M'āṣir Jahangīrī of Kāmgār Ḥusainī, he would see to what lengths Jahāngīr went on the path of rebellion. It is made a charge by Khāfī Khān against the author of the Iqbālnāma that he has out of subserviency, suppressed the details of Jahāngīr's misconduct, and of course, Jahāngīr himself is not much more outspoken, though he does confess to having murdered Abū'l Fazl. It is begging the question too to say that there is no evidence that the rebellion reached Aḥmadābād. Is not the Salīmī coinage potent evidence of the fact ? And here I would point out that the legend on the Salīmī coins, as shown in Mr. Nelson Wright's book, seems a most extraordinary one if the coinage was first issued after Akbar's death and after Jahāngīr had become emperor. Instead of Sulṭān Salīm's being called Jahāngīr and Bādshāh, he is styled Māliku-l-Mulk or lord of the country. It seems to me that such an ambiguous and unusual expression was used by Jahangir or his servants because he was not then emperor, and because he did not wish to admit that he was only governor or fief-holder of Gujarāt. Besides, he and his servants knew that his being governor or fief-holder would not justify him in issuing a coinage. For these reasons I agree, if I may venture to say so, with the author of the British Museum Catalogue of Mughal coins, in thinking that the Salīmī coins were originally issued before Jahāngīr became emperor.

It seems to me that he or his servants issued them because he was a rebel, and because, as he himself and Kāmgār Ḥusainī tell us, the great saint of Multān had appeared to a disciple in a dream, and had declared that in a few months Prince Salīm would be emperor. But it is possible that though the coins bore Salīm's name, they were not meant as an assumption of sovereignty. The very fact that some of them, at least, bore Akbar's regnal year, may go to negative the idea of rebellion. Salīm may have issued them in consequence of his having acted as Regent during the last year of his father's life. In the

continuation of Akbarnāma, Bib. Ind., ed. iii, f. 39, it is stated that in 1014, *i.e.*, the 50th year of Akbar's reign, an order was given that the Dīwāns should carry on the affairs of the empire under instructions from Sulṭān Salīm, and that the appointments of officers (Mansabdārs) should bear his seal. He or his advisers may have thought that this included the power of issuing coins, especially if in them he did not call himself emperor, and inserted the year of Akbar.

I still think it highly improbable that Jahangir would after his accession begin to issue coins bearing the name of Sulṭān Salīm. He tells us that his father never used the name Salīm in addressing him, and that he himself discarded it on his accession because it had been appropriated by the Sulṭāns of Turkey. If he began the Salīmī coins after his accession, why does he not mention them when describing the establishment of his coinage in the first year of his reign? No doubt, Salīmī coins continued to be issued from the Aḥmadābād mint for some months of Jahāngīr's reign, but this, I think, must have been merely a continuation—with or without Jahāngīr's knowledge—of a practice that had sprung up in the last year of Akbar's reign.

It is rather a curious circumstance that Salīmī was a coin-designation at least ten years before Jahāngīr's accession: see Blochmann, p. 30. But in this instance, the term had, I think, nothing to do with Sulṭan Salīm, but was used with reference to Shaikh Salīm of Fatḥpur Sīkrī, just as M'uīnī referred to the saint of Ajmer.

H. Beveridge.

72. Note on Mr. Beveridge's Article on the Salīmī Coins.

Through the kindness of the editor of the Numismatic Supplement I have been privileged to read the manuscript of Mr. Beveridge's interesting article on the Salīmī coins, and an opportunity is thus afforded me of reply. My contention that these coins in silver and in copper were issued after Akbar's death is in the main based upon the date—the year *and month*—exhibited on the coins themselves. Akbar died on the 10th of Ābān, 1014 H., and the earlier Salīmī coins bear the name of that month Ābān and of the four succeeding months of the year designated 50. Mr. Beveridge writes, "If the date 50 means anything, it means that Akbar was alive, or was supposed to be alive." But can this dictum be accepted? Several Salīmī coins are dated Isfandārmuz 50, yet before the first day of Isfandārmuz Akbar had been nearly four months dead, and certainly at the time of issue of these Isfan. 50 Salīmī rupees Akbar was not alive nor was he supposed to be alive. The "50" must evidently bear some other interpretation, and I fancy it is not

far to seek. The explanation lies simply in the fact that the number has no reference to any regnal year, but is the number of the year of issue reckoned from the commencement of the Ilahī era. The Ain-i-Akbari states, "The era of the Hijrah was now abolished, and a new era was introduced, of which the first year was the year of the emperor's accession" (Blochmann, I, 195). Thus the 50 on the Salīmī coins means essentially [Ilahī] 50. It might just as easily have been written [Hijrī] 1014; but in this instance Salīm preferred, it would seem, to date his coin in the era that his father had desired to substitute for the Hijrī. That the Ilahī era should close with the close of Akbar's life was never contemplated.

Mr. Beveridge draws attention to the fact that Salīm's rebellion was not confined to Allahābād, but extended to Etāwa, and Jaunpūr, and Bihār. Now if it was during this rebellion that the Salīmi coins were struck, we should naturally expect they would have been issued from these cities. But the breaking out of a revolt at Allahābād and Jaunpūr can scarcely be regarded as the true cause of the minting of coins at a city so far removed from the seat of disaffection as Aḥmadābād. And how is one to account for the Salīmī half rupee struck at Kābul? (Ind. Mus. Catal. vol. iii, No. 686.) Did the rebellion also extend even to that city in the far north? If Allahābād, Jaunpur, Bihār, Etāwa, Aḥmadābād, and Kābul were really all of them contributory to Salīm's conspiracy, we should, I venture to affirm, have heard far more of it than we do from contemporary historians.

It was only *after* his reconciliation to his father (in 1013 H.) that the Prince Salīm received Gujarāt in fief (Blochmann's Ain-i-Akbari, I, 412), and accordingly, if in virtue of his being fief-holder of the province coins were issued in his name, we must assume they were struck by him not as a rebel but as his father's regent. It is, however, in the highest degree improbable that Akbar would have sanctioned such action on the part of a son who had so recently given proof of hostile intentions.

The statement "it will hardly be contended that Salīm issued orders about coinage before his enthronement" seems too emphatic when one remembers how the Sūrat authorities in their zeal struck coins in Shāh Jahān's name before his coronation (Foster: "The English Factories in India, 1624—1629," pp. xxix, 232). Similar action may readily have been taken by the partisans of Salīm in early avowal of their loyalty.

Mr. Beveridge lays much stress on the improbability of the news of Akbar's death having reached Aḥmadābād in time to admit of coins being struck in Salīm's name that same month. Akbar died at Āgra on the 10th of Ābān, thus twenty days before the close of the month. The journey from Fatḥpūr Sīkrī, 23 miles west of Āgra, to Aḥmadābād, say 400 *kos*, was accomplished by Akbar in nine days and nights—a wonder-

ful feat for royalty, but not so wonderful for relays of trained runners. News travels very quick in India, and such important news as the death of an Emperor would be communicated post-haste to the province held in fief by the heir to the throne. If Akbar, accompanied by at least some small retinue, could travel the distance in nine days, the ḍāk-runners would in a matter of urgency do the journey not less quickly. But even if a fortnight be allowed, the news would have reached Aḥmadābād by the 24th of Ābān, or about a week before the end of the month, and of that week only a day or so would be required for the engraving of the dies. Hence time-considerations do not in any way bar the supposition that the Ābān 50 Salīmī rupees were struck after Akbar's death.

At the close of his article Mr. Beveridge expresses the opinion that the issue of the later Salīmī coins "must have been merely a continuation—with or without Jahāngīr's knowledge—of a practice that had sprung up in the last year of Akbar's reign." But the coins struck after the month Ābān happen not to be of the same type as the Ābān rupee. That type was subjected to a definite revision, and only in its revised form did it continue to appear month by month for the next eight months. Thus the mere continuance of a coinage already introduced does not suffice to account for the later Salīmī issues. On these both the legend was modified and the date, as each month passed, was duly corrected. After all one is surely bound to accept the date registered on the coin itself as the true date of issue, and if only this very natural assumption be made, it follows that the Salīmī coins were struck not before but after the death of Akbar.

G. P. Taylor.

Aḥmadābād:
June 1909.

73. Mughal Mint Towns.

Nuṣratābād.

On p. lxxi of his Introduction to "Catalogue of the Coins in the Indian Museum, Calcutta," vol. iii (1908), Mr. H. Nelson Wright suggests the identification of Nuṣratābād with the present town of Dhārwār. I think there is conclusive[1] evidence that it is Sakhhar (or Sagar), now in the Niẓām's Dominions, ninety-five miles S.-E. of Sholāpur, lat. 16° 35′, long. 76° 51′, see plate 34 in Constable's "Hand Atlas." On the 2nd Safar 1099 H. (Dec. 7, 1687) this place was taken by the

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[1] I agree with Mr. Irvine that the extract from the M'āsir-i-'Alamgīrī is strong evidence of the locality of the mint "Nuṣratābād" but before calling it conclusive I think we must wait for definite information that coins were struck "in the country of Sakkar" in the name of Aurangzeb.—H. N. W.

Mughals from Peḍā, Nāik, caste Ḍhedh. He was introduced at court on the 2nd Rabī' I (Feb. 5, 1688) and died five or six days afterwards. "After five or six days from his admission to an audience, he suddenly started on his journey to Hell":

Ān chunān bad-zindagānī murdah bih.

"Such evil livers are better dead than alive. His sons "and relations were exalted to appropriate rank. The "country (*ūlkah*) of Sakkar by imperial order received the "name of Nuṣratābād. It is a pleasing and well-watered "region and very productive. To Him (God) the praise that "it has been wrested from the hands of ferocious beasts of prey "having the shape of men, and has become a portion of the "protected realms."—*Maāṣir-i-'Alamgīrī*, p. 307.

ĀGRA.

I think it would be difficult, I may say impossible, to prove by any history or narrative, that Āgra was effectively occupied by Shāh Shujā. Indeed, it may be doubted whether in 1068 H. or 1069 H. he was ever nearer to it than Khajwah (Fathpur district). In the British Museum Catalogue, "Moghul Emperors," p. 135, and plate xviii, the reading of the mint-town is obviously tentative, the name being difficult to decipher because the whole of the letters are not present. Although a more practised eye than mine may see اکبر *kbar*, I confess my inability to do so; and to me the word is the same as the equally imperfect name on coin No. 691. If that yields a mythical جلون باد *Jalaun-ābād*, then I would submit that No. 690 does so also, though a little more obscurely.

W. IRVINE.

74. TREASURE TROVE (MUGHAL). A.

Out of 52 rupees recently found in village Bamhon, Tahsil Gadarwāra, District Narsinghpur, the following call for special notice:—

1. SHAHJAHAN.
Mint, Patna
Date, A. H. *absent* R. Y. 5.
Obverse. In square area the *Kalima*.
In the margins the names of the four companions with their attributes—each marginal legend being enclosed in a "mihrāb," the top sides of which meet to form the square of the area.
Reverse. In square area similarly formed

باد شا غازے

شاہ جہان

Margins. Top شهاب الدين

Right محمد صاحب ه

Bottom قران ثاني

Left ضرب پتنه

This coin probably represents the first issue of the square area type. The absence of any Hijra date is noticeable.

2. AURANGZEB.

Mint, Jahāngīrnagar.

Date, A. H. *absent* R. Y. 5.

Obverse. Usual couplet but with مهر for بدر

Reverse. مانوس

عيمدت

جلوس ه

ضرب

جهانگير نگر سنة

The early issues of this mint in Aurangzeb's reign are of considerable rarity. In a note on page 51 of Vol. III of the Indian Museum Catalogue, 1908, reference is given to a coin, somewhat similar to the present one, in the cabinet of Dr. G. P. Taylor, dated 1071-3. On that, however, the name of the mint is at the top of the reverse. On the present specimen issued two years after, we find it at the bottom. Later on still we get the square area issue.

TREASURE TROVE (MUGHAL). B.

A recent find of coins at Dhanaj, in the Yeotmal District, produced the following two rare rupees of Muḥammad Shāh.

1. *Æ.*

Mint, Machhlipatan.

Date, 1134 A.H.—fourth regnal year.

Obverse. محمد شاه

۱۱۳۴

بادشاه غازے

ک ـــــ ے

سکه مچهار

Reverse.

جلوس
میمنت
۴
مانوس سنه مچهلي
ضرب
پتن

سنهٔ ۴ is in the loop of the س of مانوس

2. *R*

Mint, Khujista Bunyād.
Date, A. H. *absent*—seventh regnal year.
Obverse. Usual. Date to right of top line but obliterated.
Reverse. Usual. Date at bottom. A five petalled flower is in the س of جلوس

There was also a third coin which I am not able definitely to place, owing to the absence of the Hijra date and the top line of the obverse legend; as the inscription is an unusual one I give it below :—

Obverse.

بادشاه غازے
فض——ل
ابو الفتح الدين
ک——
سکه مبارک

Reverse.

جلوس مانوس
میمنت
سنهٔ احد دار السرور
ضرب
[برهانپور]

The ابو الفتح on the obverse would cause one at first sight to assign the coin to Jahāndār, but it has not either of the couplets usually associated with the latter's coins, and the "laqab" فضل الدين is a further anomaly. Perhaps some coin collector may have a fuller specimen of the coin in his cabinet and be able to solve the difficulty.

The coins are in the Nāgpūr Museum.

H. Nelson Wright.

75. Where was the Mint-town Ẓafarābād?

In order to determine the locality of the mint-town Ẓafarābād it will be well, first of all, to ascertain what coins are known

to have issued from that mint. None have as yet been discovered either of gold or of copper : all are of silver, and all are full rupees. Fourteen are in my cabinet, and, excluding duplicates, five others are mentioned in the Catalogues of the Coins in the British, the Indian, and the Lāhor Museums.

The earliest specimen hitherto published is the Shāh Jahān rupee dated 32–1069 (L.M.C., page 173, No. 83). Its Obverse exhibits the Kalima in a square area, while the right-hand margin records the Hijrī year 1069. The legend in the square area of the Reverse is the normal

بادشـــاه غازی
شاه جهان

with the regnal year ۳۲ entered over the جہا. The left-hand margin registers the mint-name ظفر اباد.

Next in chronological sequence come four coins of Aurangzēb, dated respectively احدا—1069, احد —1070, 3—1070, and 3—1071, all of which bear on the Obverse the محیی الدین legend, while ظفراباد occupies the top lines of the Reverse.

Then follow five rupees ranging in date from the 6th to the 22nd regnal year of Aurangzēb, with the چو مهر منیر couplet on the Obverse, and ظفراباد now on the lowest line of the Reverse.

From the 27th till the 49th year seven specimens are known, all of the same type as the preceding, but with بدر substituted for مهر .

It is safer not to include in this list the one coin of Shāh ʻĀlam I that has been conjecturally assigned to the Ẓafarābād mint (L.M.C., p. 197, No. 3), inasmuch as the attribution is almost certainly incorrect.

There remain two specimens, now for the first time published, of Ẓafarābād rupees of the reign of ʻĀlamgīr II, one dated 5—xxxx, and the other 6—1171. Both are of identical type, and with legends that read as follow :—

Obverse :

عالم گیر ثانی
بادشاه غازی
ـــــــکة
مبارک ۱۱۷۱

Reverse :

مانوس
میمنـــت
۶
سنه جلوس
ضـــــرب
ظفر اباد

The arrangement here shown of the words on the Obverse is, I believe, unique for coins of this Emperor.

Thus of the total nineteen specimens one is of the last year of Shāh Jahān I, sixteen range in date from the 1st to the 49th regnal year of Aurangzēb, and two are of the 5th and 6th years of 'Ālamgir II.

We now pass to our special enquiry. Where was this mint-town Ẓafarābād ? The town best known of that name—indeed the only one entered on the Map of Mint-towns in Mr. Nelson Wright's Vol. iii of the Indian Museum Catalogue—is situated on the bank of the River Gumtī, less than five miles south-east of the city of Jaunpūr. Formerly known as Manaich, its name was changed to Ẓafarābād in 1321 A.D., the year in which Malik Ẓafar, the third son of Ghiyāṣu-d-dīn Tughlaq I, assumed the governorship of the district. Some thirty-eight years later, in 1359, Fīroz III, halting here on his way to Bengal, decided to found in the neighbourhood a new city. The work was at once started, and "after the building of Jaunpūr the older town decayed" (Imp. Gaz. of India, New Edition, XXIV, 426). So far as I can discover, Ẓafarābād, as distinct from Jaunpūr, experienced no revival of prosperity in the reign of Aurangzēb, and that this declining town should possess a mint in active operation throughout that reign seems of itself improbable. The improbability is enhanced by the fact that in the immediate vicinity the flourishing city of Jaunpūr had a mint of its own, from which were issuing both muhurs and rupees. My cabinet contains one of these Jaunpūr rupees bearing as its date the 31st regnal year of Aurangzēb, *and also* a Ẓafarābād rupee of his 30th year. That two mints situated within five miles of each other should be simultaneously producing silver coins, is scarcely credible, and accordingly we shall do well to look for the home of the Ẓafarābād mint elsewhere than under the shadow of the stately monuments of Jaunpūr.

Can then the mint-town Ẓafarābād be identified with the place of that name to which Manucci in his Storia do Mogor makes reference ? (Irvine's Trans. I, 322, 323).

"The sixth river and the chief one is called Aṭak, or otherwise Indus, because it separates the lands of India from the land of the Paṭhāns, from Persia and the province of Kābul. On the western bank of the river Aṭak is a town named Ẓafarābād, and on the eastern a castle called by the same name, where all the caravans halt from Persia, Tartary, Balkh, Samarqand, Bukhārā, Kāshgar, Kābul, and many other kingdoms."

On this passage Mr. Irvine in his admirable translation of the Storia adds the following interesting note.

"Ẓafarābād must be, I think, another name for Aṭak, although that place is on the eastern bank of the Indus. There is a castle, Khairagaṛh, on the opposite (western) bank. Mr. M. L. Dames is inclined to the same opinion. There is no evi-

dence that Aṭak was ever renamed Ẓafarābād ; but there is an obscure, insufficiently identified mint-town of that name, which is usually placed at Ẓafarābād in the Jaunpūr district, though I suggested long ago Ẓafarābād Bīdar in the Dakhin. Mr. Dames says the shape of the letters on the coins suggests rather a northern than a Dakhinī origin. If Aṭak was also called Ẓafarābād, a gap is filled ; for Aṭak, as a mint-town, disappears between Akbar's reign (1556-1605) and that of Muḥammad Sh̲āh (1719-1748), while Ẓafarābād appears in the interval (coins of Sh̲āh Jahān, 1627-1658; Aurangzēb, 1658-1707; and Bahādur Shah, 1707-1712)."

Further, in his Additional Notes, Mr. Irvine states that this Ẓafarābād "may well have derived its name from Ẓafar Kh̲ān, son of Zain Kh̲ān, Kokah, who was appointed to the charge of Atak in Jahāngīr's second year (1607)." (IV. 426).

Now this hypothesis that the Ẓafarābād coins issued from the mint-town Aṭak, since commending itself both to Mr. Irvine and to Mr. Dames, should receive careful consideration. If I mistake not, however, the numismatic evidence adduced in its support has been greatly overestimated. The facts, briefly stated, are as follow.

The mint-town Atak—or to give it its full name Atak Banāras—was never in brisk operation. Rodgers indeed remarks, "Coins from this mint are very rare indeed" (L.M.C., p. 114). So far as is now known, with two exceptions, or perhaps with only one, the Aṭak coins are all of copper ; the Ẓafarābād, on the other hand, are all of silver. The Aṭak *fulūs* was struck during just twelve years of Akbar's reign, from Ilahī 37 to 48, the twelve years, thus, immediately following the completion of the first Hijrī millennium (1000-1011 A.H.). Thereafter only two coins from the Atak mint are in evidence, one a rupee of Aurangzēb, ascribed doubtfully to Atak Banāras, and the other a rupee of 1158 H., unique as bearing the simple mint-name Aṭak without the complementary Banāras. Thus, excluding the doubtful rupee, Aṭak coins range from 1000-1011 A.H., and after an interval of no less than 147 years a single rupee of this mint appears in 1158 A.H. Now do the Ẓafarābād coins fill this big gap ? They cover just the 48 years from 1069-1117 A.H. Hence for 99 years out of 147 not a single Aṭak nor a single Ẓafarābād coin is known. Verily then, the Ẓafarābād rupees notwithstanding, the gap still yawns. If, however, the Aṭak Banāras rupee of Aurangzēb be held to be correctly attributed to that mint, then, accepting the suggested identification, we shall have to admit that in the reign of Aurangzēb from one and the same mint some coins issued bearing the mint-name Aṭak and others Ẓafarābād—a procedure extremely improbable.

The statement that the workmanship of the Ẓafarābād coins bespeaks for them a northern rather than a southern origin should not, I think, be pressed. For what workmanship is

distinctly northern and what southern? In the south the Bījāpūr mint supplied excellent, the Sholāpūr fair, and the Gulkanda poor samples of the coin-engraver's art: even as in the north the Āgra coins are of superior execution to those of Multān, and these again to those of Qandahār. In the matter of workmanship the Ẓafarābād rupees seem to me quite up to medium quality, and their lettering bears resemblance not less to the calligraphy of Kulbarga in the south than to that Nārnol in the north. Certainly keener eyes than mine are needed to distinguish merely by their make the Ẓafarābād rupees from those of either the southern mint of Daulatābād or the northern mint of Lāhor.

If then the Ẓafarābād coins along with those of Aṭak do not constitute a continuous series, and if the shape of the letters proves nothing as to the place of origin, there remains no evidence, so far as I am aware, to warrant the identification of the Ẓafarābād mint with that of Aṭak.

Yet another town bore the name of Ẓafarābād—Bīdar in the Dakhin. That this place may have been the mint-town Mr. Irvine suggested "long ago," and Mr. Nelson Wright in his recently published Catalogue of the Coins in the Indian Museum declares in favour of this as the "more probable" location of the mint. Founded by Aḥmad Shāh I, the ninth king of the Bahmanī dynasty, Bīdar supplanted Kulbarga as the seat of the government, and became about 1430 A.D. the capital of the kingdom. It is the Muḥammadābād of the Bahmanī coins, and within its citadel are still to be seen the ruins of a mint that was active so late as the reign of Tīpū Sulṭān. It was in 1656 A.D. (1067 A.H.) that Prince Aurangzēb signalised his capture of the town by changing its name to Ẓafarābād. Thereafter it remained a part of the imperial dominions till Āṣaf Jāh by his victory at Shakar Khelda in 1724 A.D. established his independence and founded the house of the present Niẓāms. Thus this Ẓafarābād Bīdar came into the possession of the Mughals at the very close of the reign of Shāh Jahān I, and continued subject to them throughout the long reign of his successor. Now it is precisely this period that we find covered by the coins of Ẓafarābād, its earliest rupee dating from the last year of Shāh Jahān, and later issues ranging from the 1st to the 49th year of Aurangzēb. So close a correspondence of the history of Bīdar with the dates on the Ẓafarābād rupees constitutes a strong argument for identifying the mint-town with Ẓafarābād Bīdar.

How to account for the renewed activity of this mint in the fifth and sixth years of the reign of 'Ālamgīr II is a problem that still awaits solution. Inasmuch as the term Ẓafarābād admits of being regarded as an honorific epithet synonymous with Dār al Fatḥ, 'the Seat of Victory,' it is conceivable that 'Ālamgīr II's Ẓafarābād may be an entirely different place from Aurangzēb's. This distinctly improbable conjecture I

venture to hazard merely from my inability to suggest any adequate reason why Bīdar so late as 1757 A.D. (1171 A.H.)—thus some thirty-three years after its inclusion in the Ḥaidarābād State—should be striking coins in the name of the feeble Mughal Emperor ʻĀlamgīr II.

GEO. P. TAYLOR.

OCTOBER, 1909.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 6th October, 1909, at 9-15 P.M.

DR. E. DENISON ROSS, PH.D., in the chair.

The following members were present :—

Babu Monmohan Chakravarti, Mr. B. L. Chaudhuri, Mr. H. G. Graves, Dr. E. P. Harrison, Mr. H. H. Hayden, Mr. C. H. Kesteven, Mr. W A. Lee, Dr. Indumadhab Mallick, Lieut.-Colonel F. P. Maynard, I.M.S., Rev. A. C. Ridsdale, Major L. Rogers, I.M S., Captain H. E. Simth, I.M.S., Mr. G H. Tipper, Pandit Yogesa Chandra Sastri-Samkhya-ratna-Vedatirtha.

Visitors:—Rev. G. Dandoy, S.J., Rev. H. Hosten, S.J.

The minutes of the last meeting were read and confirmed.

One hundred and seventy-six presentations were announced.

The General Secretary reported :—

1. That Lieut.-Col. M. J. Kelawala had expressed a wish to withdraw from the Society.

2. That Mr. Jain Vadya and Babu Mohini Mohon Mitra were dead.

3. That Mr. T. H. D. LaTouche had been elected a Trustee of the Indian Museum in the place of Sir Thomas Holland, resigned.

The Chairman announced that in accordance with Rule 38 of the Society's Rules, the names of the following gentlemen had been posted up as defaulting Members since the last meeting, and were now removed from the Member list :—

Babu Sanjib Chandra Sanyal; Kumar Rameshwar Maliah, and Babu J. N. Das, Khalispur High School, Daulatpur, P.O. Khulna.

The proposed new Rules in connection with the creation of Fellowships in the Society, of which intimation had already been given by circular to all Members, were brought up for final disposal.

The votes of the Members were laid on the table, and the Chairman requested any Members who had not expressed their

opinions to take the present opportunity of filling in voting papers. Several such papers were filled in, and with the votes returned by Members, were scrutinized. The Chairman appointed Dr. E. P. Harrison and Mr. C. H. Kesteven to be scrutineers. The scrutineers reported as follows:—

For the proposed new rules	..	108
Against the proposed new rules	..	10

Carried.

The following five gentlemen were balloted for as Ordinary Members:—

Prof. Paul J. Brühl, M.I.E.E., F.G.S., Prof., C. E. College, Sibpur, proposed by Sir Thomas Holland, seconded by Mr. G. H. Tipper; *Mr. Percy Brown*, A.R.C.A., Principal, Government School of Art, Calcutta, proposed by Dr. N. Annandale, seconded by Mr. G. H. Tipper; *Mr. A. Hale*, proposed by the Rev. A. C. Ridsdale, seconded by Lieut.-Colonel F. P. Maynard, I.M.S.; *Babu Ordhendra Coomar Ganguli* Solicitor, High Court, Calcutta, proposed by Babu Rakhal Das Banerji, seconded by Babu Amulya Charan Ghosh, Vidyabhusana; *Dr. Khaliluddin Ahmed*, L.M.S., proposed by Maulavi Abdus Salam, seconded by Dr. A. Suhrawardy.

The following papers were read:—

1. *An illustrated Note on an Indian Deity called Revanta.*—*By* Pandit Venode Behari Bhattacharya. *Communicated by* Dr. T. Bloch.

This paper will be published in a subsequent number of the *Journal*.

2. *Some Persian Folklore Stories concerning the Ruins of Persepolis.*—*By* Captain C. M. Gibbon.

3. *Stone Implements from the Tengyueh District, Yunnan Province, Western-China (with a short account of the beliefs of the Yunnanese regarding these objects).*—*By* J. C. Brown.

These papers have been published in the *Journal* for August, 1909.

4. *The Word "Scarlet."*—*By* General [illegible]-Schindler. *Communicated by* Dr. E. D. Ross.

5. *Reference to Babylon in the Rigveda.*—[illegible] Sen, M.A., M.R.A.C.

These papers will be published in a subsequent number of the *Journal*.

6. *An Alchemical Compilation of the 13th Century A.D.*—*By* H. E. Stapleton, B.A., B.Sc.

This paper will be published in the *Memoirs*.

7. *Contributions to the History and Ethnology of North Eastern India, I.—By* H. E. STAPLETON, B.A., B.Sc.

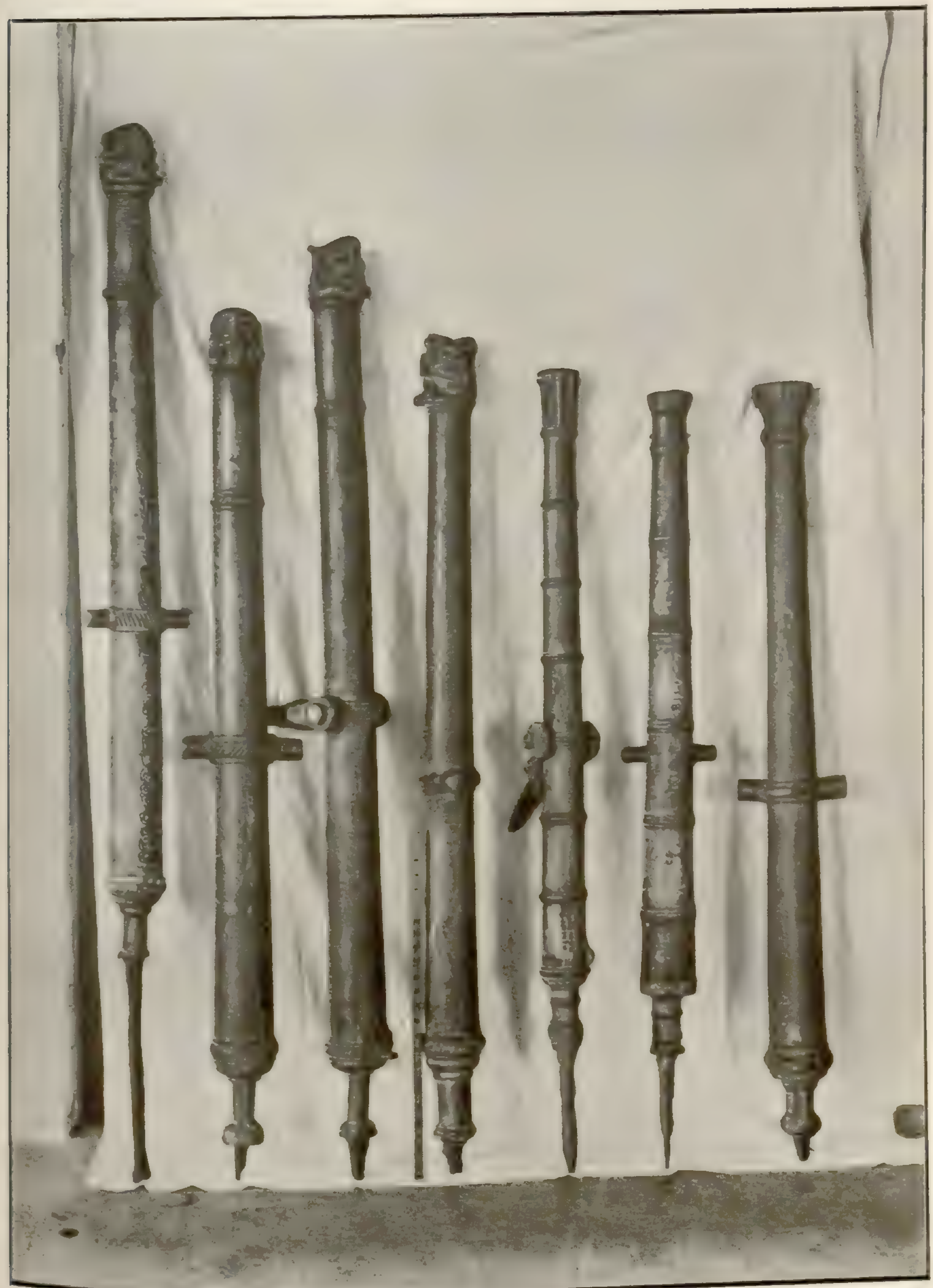
This paper will be published in a subsequent number of the *Journal.*

Half tone.

Survey of India Offices, Calcutta. 1909

PLATE OF SRI GAYADATUṄGA DEVA.

Reverse.



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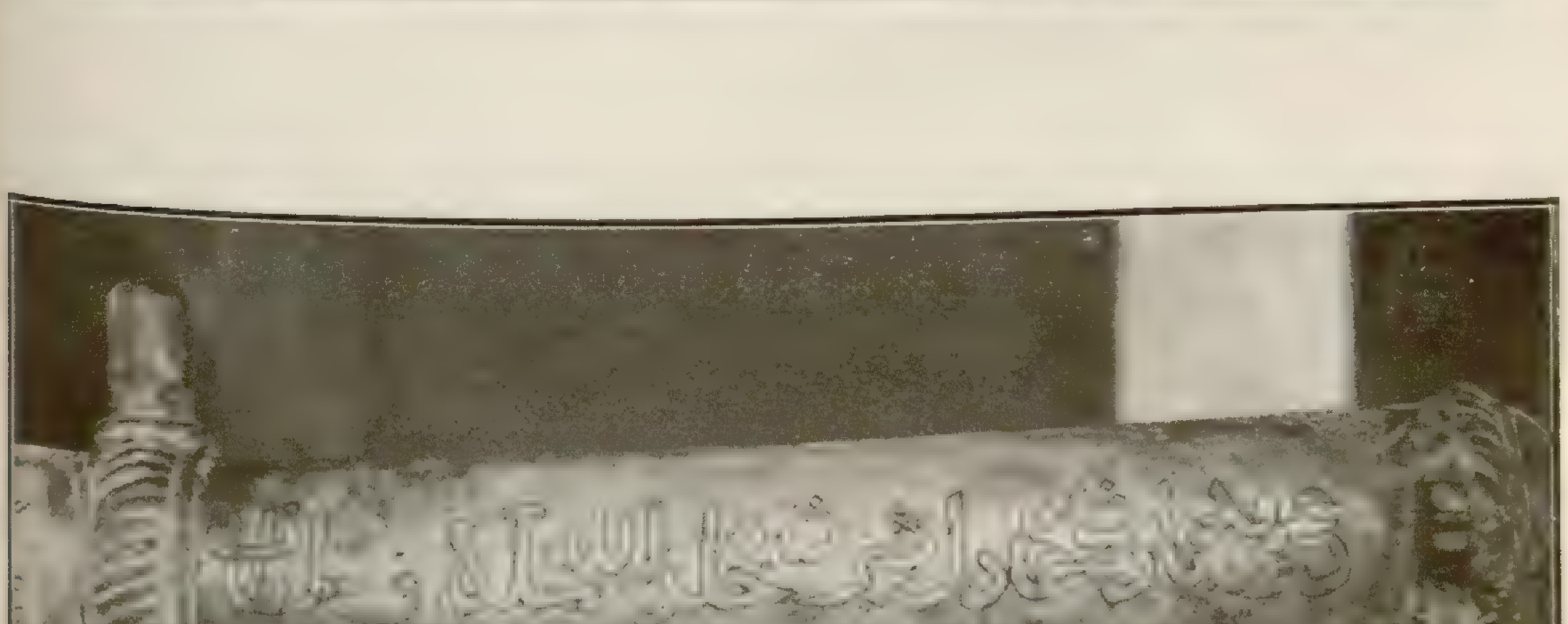
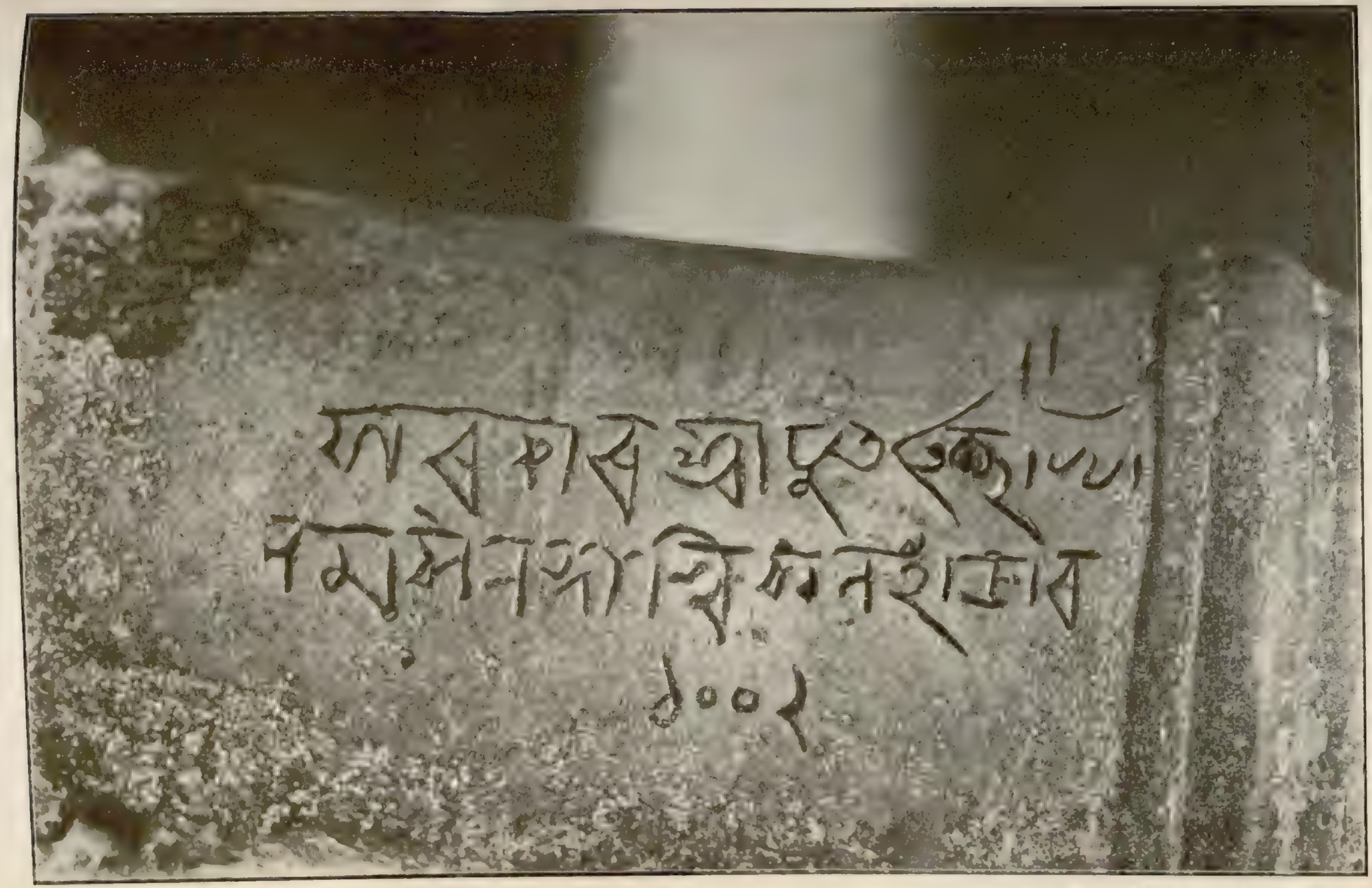
I II III IV V VI VII

CANNON OF 'ISĀ KHĀN.



CANNON OF SHER SHĀH (*of* Pl. XXV, No. I).



INSCRIPTION ON 'ISĀ KHĀN'S CANNON. No. V, Pl. XXV. x 1.

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35. An Illustrated Note on an Indian Deity called Rēvanta.

By Pandit Binoda Bihari Bidyabinoda.

We learn from Varāhamihira's Bṛhat-Saṁhitā that at his time a deity called "*Rēvanta*" was worshipped in North-Eastern India. In the 58th chapter, which contains the rules for preparing images of Indian gods, in the second half of verse 56 we read as follows:—

रेवन्तोऽश्वारूढो मृगयाक्रीडादिपरिवारः ॥

"Rēvanta (*should be represented*) on horseback surrounded by "a hunting party."

To modern Hindus a god by the name of *Rēvanta* is hardly known, and we have to look into the older periods of Indian history and art for further information. The only indications left to us by Varāhamihira for identifying any ancient image of some Hindu deity with Rēvanta have just been mentioned. It is evident from his description that at his time Rēvanta, so to speak, stood only on the lower platform of the Hindu Pantheon. However, the mere fact of his finding a place in Varāhamihira's descriptive list is sufficient to prove that he must have been of some importance, and for this reason we may well expect to find some images of Rēvanta still preserved to us.

According to the Viṣṇu-Purāṇa, iii, 2, 6 and 7, Rēvanta was the son of Sūrya, born by Sūrya's wife Saṁjñā, who had adopted the body of a mare. In that shape she gave birth to three children, all of them conceived from Sūrya, *viz.*, first the *Aśvinī-kumāra-dvaya*,[1] and thereafter *Rēvanta*

It is a remarkable fact that among the many mediæval images of Hindu gods from Magadha or Bihar, we find some equestrian statues closely resembling the description given by Varāhamihira of the images of Rēvanta. This fact becomes all the more important if we remember that Varāhamihira himself was a Māgadha Brāhmaṇa.[2] The equestrian statues just referred to have up to the present date been described as images of *Kalkin*, *i.e.*, the tenth, or future incarnation of Viṣṇu, and, undoubtedly, Viṣṇu in his future *Avatāra* used to be represented in a similar manner riding on horseback.

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[1] Probably morning and evening stars are meant by this pair of "heavenly twins."—T. Bloch.

[2] See Kern's *Preface to his edition of the Bṛhat-Saṁhitā*, *page* 1. The second part of the name, *mihira*, the well-known Persian word for 'Sun,' suggests that Varāhamihira was a *Maga* or *Śākadvīpīya Brāhmaṇa*, a class of Brāhmaṇas of Persian or Scythian origin whom we meet with frequently in Magadha or Bihar during the Middle Ages.—T. Bloch.

However, I think that the attendant figures on the images just referred to—an illustration of which is published along with this note—preclude us from upholding their old name as images of *Kalkin*, and that in view of their close agreement with Varāhamihira's description *we should in future call them images of Rēvanta*. As will be seen from the illustration published with this note, the man on horseback is followed by two dogs, one running under the horse and the other chasing a deer; two antelopes in front of the horse; an archer ready to shoot the deer; two drummers, two cymbal-players, one umbrella-bearer, two *bānghi* pole-bearers, one water-carrier. Another attendant carries some kind of game on his shoulders, perhaps a boar, while a number of armed attendants are marching in front of the *cortège*. The other images of the same type which are in the Indian Museum closely agree, although the attendants are a little less in number.

There can be no questioning as to the fact that the attendant figures just described have no place whatever in the legend of Kalkin, the future Avatāra of Viṣṇu. All that we read about him in the Purāṇas is that he will appear riding on a horse, and so we find him also represented in sculpture on the numerous relievos of the ten Avatāras of Viṣṇu, which are known to us from Northern India. On the other hand, it is evident that the archers, dogs, and other attendants are very well suited for a person whom the artist intended to represent as hunting (*mṛgayākrīḍā*), such as Rēvanta used to be represented according to the description by Varāhamihira. Thus, the musicians playing drums and cymbals do this in order to frighten the game and to drive it out of the jungle into the open fields. One part out of the hunter's bag is already carried by one of the attendants on his shoulders, *viz.*, the animal which I take to be a boar. The "*bānghīwālās*" carry water along for the use of the hunting party, and the bowl held by the person on horseback indicates that he is making use of this simple refreshment. The umbrella which is carried over the head of the man on horseback simply indicates his royal rank, and the dog following the horse proves that the man riding on the horse is out hunting.

Thus all these indications clearly point to Rēvanta, and prevent us from calling the main figure in those images "Kalkin." There remains, moreover, one important point to be noted. The man on horseback wears boots like those worn by Sūrya on his many images. It would be difficult to explain this attire in an image of Kalkin, while it can not surprise us in the least to find Rēvanta, the son of Sūrya, dressed like his father and wearing boots in accordance with the fashion of the people from Northern India.[1]

[1] उदीच्यवेषं, Varāhamihira, *l. c.*, *v.* 46.

36. Some of the Problems set us by the Rivers of Bengal.

By W. A. Inglis.

In an interesting paper, which was published in the "Journal of the Asiatic Society of Bengal" for September, 1908, Captain Hirst, I.A., has discussed several questions connected with the river Kosi in particular and with rivers in the plains of India generally. The paper deals in part with what is, perhaps, a somewhat speculative theory in regard to the rules which Nature has prescribed for the behaviour of rivers in the periods of youth, middle age, and decay. The intervals of time involved are indeterminate, but are certainly vast as reckoned in years or even in centuries. It may be of interest to speculate as to the conditions which are likely to prevail when the Himalayas have been worn down to the approximate level of the plains, but we can hardly put such speculations to any practical use in our present work-a-day world.

Captain Hirst has, however, made some practical suggestions with respect to works which might be carried out, or which should be abstained from, having regard to the existing stage of river growth. He has invited an examination of his proposals, and as during the course of my service in the Public Works Department I have had, occasionally, to deal with such matters, I venture to resume the discussion.

In regard to the general question of the construction of marginal embankments which have for their object the prevention of the overflow of flood, Captain Hirst says:—

"Embankments designed to keep every drop of flood "water from protected lands are inadvisable, but it may "be admitted that if the design of the embankments permits "certain flood waters to wander over protected areas, those "embankments may be of use, and Nature may, not un- "reasonably, show no resentment to their growth; in other "words, it may, at any time of unusual flood, be necessary to "admit flood waters to so-called protected lands, even to the "extent of seriously inundating those lands."

With this statement of the case, I entirely concur, and I think that it is the view held by nearly all engineers who have had experience of flood banks in Bengal. It must, however, be recognised that it is not possible to lay down any hard and fast rule or precept which can be applied to all rivers alike.

Captain Hirst writes that:—"All rivers flowing through "plains similar to the Gangetic Plain behave in much "the same manner." This can only be accepted in a very general sense. It is true that all such rivers have certain features in common. They are all unable to pass a high flood within their natural banks. They are all silt-bearing to a greater or less degree, and they are all liable to bank erosion. There is, however, a great variation in these factors, and I would lay great stress on the necessity for the careful consideration of the peculiarities of each river.

In a great many cases the natural conditions render close embanking practically impossible. The following instances will illustrate this.

The river Damodar rises in the Chota Nagpur hills and flows into the estuary of the Hughli through the Burdwan and Hughli Districts. It was calculated in 1853 by Captain (later General) Dickens that at the head of the deltaic portion of the river the flood volume was 583,672 cusecs,[1] while opposite the town of Burdwan the capacity of the channel had fallen to 253,082 cusecs, and at Amta, just above the tidal portion, it was only 76,519 cusecs. In this case the problem was solved, or perhaps, it would be more correct to say that the knot was cut, by close banking the left side of the river and leaving the right bank for the greater part open to spill.

The Selye is one of the streams which pour their floods into the inundated tract in the Midnapur District. In 1865 Lieut. R. G. Smyth, R.E., reckoned the flood discharge, where it enters the plains at 72,063 cusecs, while near the outfall into the Rupnarain estuary the channel could only accommodate 21,566 cusecs. The Cossye is another stream passing through and over this tract, which, at times of high flood, becomes an inland sea. It was calculated by Mr. Apjohn that, during the height of a flood which occurred in October, 1876, the volume of water passing the weir at Midnapur was 187,400 cusecs, while only 45,400 cusecs were passing within the channels of the river in the lower portions.

In Orissa, the Khoakhye branch of the Mahanadi passes into and through the Puri District. A very careful enquiry into the volume of flood of the Mahanadi and the capacity of the numerous channels through which the flood finds its way to the sea, was made by Mr. Rhind shortly after the occurrence of a very high flood in 1872. He calculated that the greatest volume of flood entering the head of the Khoakhye was 334,482 cusecs, while the channels in the Puri District by which the flood can pass to the sea could not be depended on to pass more than about 45,000 cusecs.

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[1] Short for 'cubic feet per second.'

In cases such as these it is obvious that any idea of confining the whole flood within marginal banks is altogether out of the question. There are, however, other rivers in the plains with respect to which the conditions are different. For instance, the river Gandak, which is of about the same size as the Kosi, and which issues from the Himalayas only a short distance to the west of that stream, has a channel of such capacity throughout, that the whole flood is, ordinarily, passed to the Ganges, with the aid of marginal embankments of moderate height in which there are no gaps or escapes. I am far from saying that I think that such a state of affairs is altogether desirable, but there is no doubt that, in some cases, it is practicable to create it.

Captain Hirst alludes to the evils which have been caused in China by embankments ill-applied, and he expresses a doubt if the Indian engineers have sufficiently taken to heart the warning given. I can, I think, give an assurance on this point. Questions with regard to the effect of marginal flood banks on the régime of the channels of the rivers by which they stand and whose floods they confine, are now, and have been for many years, frequently under discussion. By some of the engineers who have had to deal with the rivers of Bengal, marginal embankments have been held as altogether abominable. By others, among whom I number myself, it has been held that marginal flood banks, designed with discretion and with a proper understanding of the factors of the case, are of service. It is, however, fully recognised that it is rather that they are a lesser evil than uncontrolled floods, than that they are in themselves a positive good.

Mr. Fitzgerald, Superintendent of Government Embankments, in a report to the Board of Revenue (dated 5th October, 1829) on the state of the embankments on the river Gandak, wrote that on the right bank, in the Saran District, the river had encroached and destroyed a considerable portion of the embankment. With respect to the extent of the inundation he said:—

"The extent of it, upon an estimation which I believe "to be much within its real limits, cannot be less than "120,000 beegahs. When it is considered that from the "whole of this space one crop of the two generally produced "in the year has been entirely prevented, some idea may "be formed of the benefit that would be derived from the "re-construction of the bunds.

"Supposing the average produce of each beegah to yield "Rupees 7 per annum (an average of Rupees 3 below the "productive rate of the Tirhoot District), the total loss sus-"tained by the diminution of the cultivation will annually be "upwards of four lacs of rupees.

"The above account of the damage caused to the Saran

"District from the neglect of the bunds will not be deemed an "exaggerated one when the nature of the inundation be "considered. At Belloe and at Butgong, the two principal "places where the embankments have been carried away, the "river has made such encroachments that it has now reached "the low land and formed for itself channels in every direc- "tion. Instead of flowing gradually over its banks as it would "do in most situations (even where there are no embankments), "it now enters the interior country in a volume of such "magnitude and depth as it is quite impossible for any species "of cultivation, to which the natives of Upper India are accus- "tomed, to withstand.

"In recommending the restoration of these banks, I am "desirous of not being thought inconsistent to principles which "I have advocated on other occasions. I consider the differ- "ence in the cultivation between the Lower and Upper Pro- "vinces to be quite sufficient to explain the necessity of different "systems being acted on. In the one instance the country "was well adapted to receive the inundation from the numer- "ous deep and uncultivated jheels which were to be found "scattered over its surface, the bottom of which it served "to raise by the deposit of alluvium, and ultimately by this "process to bring them into cultivation. In the other we find "the country reduced from the highest state of fertility to one "of comparative waste, whilst no ultimate benefits are ever "likely to be derived of sufficient magnitude to restore the "losses which the admission of the inundation has already "occasioned."

In 1852 Major Baker (later Sir William Baker, Secretary to the Government of India) wrote, in connection with a proposal to confine the flood of the Damodar by embankments on both sides of the river:—"If, according to the "third project, it be determined to retain the embank- "ments. I have no doubt that they may be re-constructed "sufficiently far apart, and with sufficient height and "section, to contain and confine such floods of the Damoo- "dah as have been hitherto recorded, but the ultimate "and unavoidable effect of such measure would be to raise "the river bed, to necessitate a constant and proportionate "increase to the height and section of embankments and "to stimulate the growth of the shoals and sand banks at "the mouth of the river. No height that could be given "to the embankments would protect them from being occa- "sionally undermined by an oblique set of the current, "and a breach thus occurring would expose the country and "the Railway Works to the risk of greater disaster than "would be possible in the present state of the banks. The "certain evils which I have just described might be of slow "growth, and the contingent ones might not happen for

"years, but such as they are, they are inseparable from this "plan, and it might even be said, that the more perfectly the "embankments are maintained in the meantime, the greater "will be the eventual catastrophe."

As I have already remarked, this case was dealt with by having the right bank of the river open to flood, while the left bank, on which are the East Indian Railway and the more important towns and villages, was provided with an efficient embankment without any spill-ways. So far, it does not appear that there has been any appreciable rise in the flood levels of the lower portion of the Damodar, but in the course of time, as the surface of the country open to flood on the right bank is raised by the deposit of silt, some rise must take place unless the channel of the river enlarges to a corresponding extent. This was recognised at the time when it was decided to carry out the work. Captain Dickens wrote in 1853:—"It is true that we cannot calculate upon permanence "in the improved state of things, on the whole, which will "ensue; but, as the improvement will in all probability last "for many years, and as there will be, meanwhile, opportunity "afforded to watch the effects of the floods and to devise "further measures, which may result in still greater improve-"ment, this objection appears to form no reason why the "measure of relief afforded at so small a cost should not be at "once applied."

In 1858, Captain Harris, who carried out a most valuable survey of the river Mahanadi and its delta, expressed the opinion that the growth of the embankments in the delta between 1840 and 1856 had caused a higher level of flood. This view was not, however, accepted by Captain Short, who was then Superintendent of Embankments. He pointed out that it could hardly be said that the Mahanadi was embanked at all, as, at times of high flood, the water spread over the country generally. In his opinion what was most wanted was an endeavour to maintain a certain equilibrium in the division of the flood at the head, and throughout the main branches of the delta.

Since that time much has been done to improve the embankments in Orissa, largely in connection with the canal system. Large areas have been provided with a network of canals, and from these areas the flood has been effectually excluded. In the tracts which are outside the Canal system many of the channels are embanked, but spillways are allowed and some channels have no flood banks. The distribution of the flood is now fairly regular and, certainly, if we compare the existing conditions with those described in the early papers, we can claim to have made a considerable advance. It is, of course, the case that the lands open to flood will, very gradually, be raised in level while those protected will

remain stationary, and, as in the case of the Damodar, so here, the flood level may in time rise. In either case, however, the outlet to the sea is near, and as the mean sea level may, for practical purposes, be taken as a fixed quantity, any rise in the flood line will give an increased gradient and so tend to increase the discharge capacity of the channels in the delta. In Orissa there is no difficulty in the way of drainingt he protected lands, and, I think that it may be said that we have here the advantages of protection from flood with as few of the disadvantages as is practicable.

I think that these instances are sufficient to show that the dangers of flood banks are understood by those who have to deal with them. At the present time the chief aim of the embankment engineers, in parts of Bengal, is to lessen the bad effects caused by existing embankments of long standing which were made without method. Suggestions have often been made for the wholesale removal of offending banks, but the vested interests in the protected lands are great, and the present certain loss is more apparent than the prospective future gain. Any action in this direction must necessarily be very gradual.

We sometimes hear it urged as a general objection to flood banks that they are an interference with the operations of Nature. Thus, Captain Hirst says :—"Any training works carried "out with the object of forcing a river, of the nature of those "under discussion, however small that river may be, to follow "and maintain a course which it has no tendency to assume, "must be contrary to the intentions of Nature herself. An "embankment with little or no water way through it for the "carrying off of flood waters, is a glove thrown in Nature's "face—an insult which she has not yet been known to leave "unavenged."

It is, no doubt, the case that we can do nothing to control or alter the action of the great natural forces. We cannot cause the rain to fall, or the sun to shine, or the wind to blow. We can, however, and we do every day, interfere with and modify the operations of Nature. Every field that is ploughed and sown with corn is such an interference. We have, by selection and crossbreeding, modified very many plants and animals. We construct reservoirs to store water and we abstract water from streams and apply it to the irrigation of land without any regard to the apparent intention of Nature. We protect the banks of rivers from natural erosion and we dredge up sand and mud from places in which Nature intended it to remain. There are, of course, limits within which we must confine our efforts, and success depends on a due apprehension of these limits, and on a just sense of proportion.

In the matter of flood banks, Nature has taken the first step. In the plains of Bengal, the rivers are, as a rule, of a deltaic character and we find the highest ground along their

margins. That is, the stream in its natural condition is already to some extent embanked. This is due to the deposit of silt from the water flowing out of the stream over its sides. I think, therefore, that it is not an undue interference with natural conditions to add an artificial embankment of moderate height. We must, however, keep clearly in view the necessity of ascertaining what capacity the embanked channel will have for the passage of floods, and when, as is generally the case, the capacity decreases as we proceed down stream, overflows have to be allowed at suitable places.

If the problem were limited to making provision for the passage of certain determined volumes of water it would be comparatively simple. What makes it much more difficult is the addition to the water of the mixture of sand and earth, generally termed silt, which is brought down in the flood from the uplands. The silt, which varies greatly in composition and in proportionate volume in different rivers, must either be passed to the sea, or to the receiving river in the case of a tributary, or, it must be spread over the adjacent country, or, it may, for a time, accumulate in the channel itself. It may be assumed that rivers of the class we are considering, when in flood, enter the plains with a high velocity and heavily charged with silt. The power of carrying forward the silt depends on the velocity of the stream, and as the velocity diminishes some of the silt has to be dropped. In the case of a low flood the water mostly remains within the banks, natural or artificial. The stream will carry on part of the silt to the sea or to the main river. The remaining part of the silt, mainly the sand, must be dropped in the bed and must, for the time being, diminish the capacity of the channel. This must happen in all cases whether there are artificial flood banks or not. When there is a high flood the river has to seek relief, and, in addition to the passage of water and silt over the banks generally, the relief is frequently found by means of gaps or breaches in the banks, through which large volumes of sand are thrown up over the surface of the country and the channel of the river is thereby temporarily improved. That is, speaking generally, during seasons of low floods the channel deteriorates and becomes less capable of passing flood, then, a high flood comes and effects a silt clearance on a large scale, the sand being thrown up over the country and the bed deepened. The gaps in the banks, if left uncontrolled, frequently develop, and, in some cases, the course of the stream is actually changed while the former channel is almost closed by the deposit of sand. An instance in point is the Begua breach in the right bank of the Damodar river. Such changes come, no doubt, in the due course of Nature's operations, but, none the less, they are extremely inconvenient in a country already thickly populated and where it is no easy task for the inhabitants to move to

fresh lands. Along the new course, cultivated lands are submerged and eroded, or are covered with sand, as they may fall in the bed or banks of the new stream, while along the old course the loss of water in the dry season is often seriously felt. Now, when a river has banks of moderate firmness, so that side erosion can be kept within reasonable limits, there is little or no practical difficulty in closing such gaps and in providing equivalent spillways for the flood by means of paved overflows at about the level of the natural bank. A pavement with rubble stone or concrete blocks is sufficient to prevent a gap forming. It is not difficult to calculate with approximate accuracy the volume of flood which should be provided for at the sites selected for the overflows. What, however, has not yet been fully determined is whether those overflows will act effectively in relieving the river channel of sand. As has been mentioned by Captain Hirst, the silt is partly carried in suspension in the water and is partly rolled along the bed, and it is with respect to the latter part that there is some doubt. Escape sluices with large vents would, perhaps, be more efficient, but they would also be more expensive.

I have said that the embankment engineers recognise that flood banks have their dangers, but I think that it must be admitted that it is desirable that more attention should be given to the observation and record of alterations in the width and depth of the channels of the rivers, and also of the effect of the deposit of silt in raising the level of the flooded lands. The Gandak has been close banked for a good many years, and we ought to know more than we do with regard to the question whether the bed of the river is really being raised relatively to the protected lands, and whether the capacity of the river to pass flood is deteriorating or improving.

Captain Hirst alludes to damage done by flood in recent years in North Bihar and expresses the opinion that it is more than probable that these floods are mainly, if not entirely, due to the prevalence of embankments in those parts. This, I think, shows a tendency to take any stick as good enough to beat a dog with a bad name. In effect, it cannot, justly, be said that flood embankments are prevalent in North Bihar. Certainly, in the Darbhanga district, with regard to which Captain Hirst writes that the flood level has risen 3 feet in 20 years and that inconceivable and irreparable damage has been done, the streams causing the damage are not embanked. In the Muzaffarpur and Champaran districts there are some private embankments on the Bur Gandak river, but they are of small height.

There is, sometimes, a tendency to write of flood banks as if they actually caused the flood. This, of course, is not the case. The flood is due to excessive rainfall on the catchment

of the stream, and to the conditions under which the water flows off the catchment. What flood banks can do, and do do, is to alter the distribution of the flood water. They do this in two ways: 1st, in the case of a river which flows in a hollow, such as the Ganges above its deltaic portion, they reduce the reservoir space for the spread of the inundation in the valley or basin of the river; 2nd, in the case of streams of a deltaic character which flow on ridges, they prevent the flood leaving the parent stream and flowing away over, or through gaps in the sides of the ridges. Consequently, if protection is given to lands on the margin of the upper part of a stream there will, necessarily, be a greater volume of flood, or rather, a greater share of the flood, in the lower part of the stream. That this has occurred to some extent along the Bur Gandak is probable, but here, as generally, accurate information is wanting.

Captain Hirst has also drawn attention to the embankment which carries the Tirhut State Railway along the northern bank of the Ganges to the west of the Kosi. This embankment to a small extent limits the reservoir space of the Ganges, but its action in this respect is inconsiderable, and it serves rather as a division between the inundation of the Ganges and that caused by the overflow of the streams from the north, which turn eastwards and join the Kosi near its mouth. It does not appear to be probable that it will cause any sensible alteration in the flood level of the Ganges, and I do not share Captain Hirst's apprehension that it may injure the navigable channel of that river.

With respect to the Kosi itself, I think that there will be a general agreement by those who have had any experience of river embankments, with Captain Hirst's conclusion that the time has not yet come for any attempt to embank or to train that river, if indeed, it is, in its present state, worthy of the name of river at all. On entering the plains it flows over rather than through, a flat lop-sided cone of sandy silt which it is itself depositing. The cone is lop-sided because on the west after a short distance the land is higher, while on the east and south there is, for a considerable distance, a gradual slope of about the same gradient in either direction. In 1876, in connection with a general enquiry into the possibilities of irrigation canals from the streams of North Bihar, Colonel Haig, R.E., wrote about the tract of country between the Kumla and the Kosi:—"The tract comprised between the two rivers men-
"tioned is about 65 miles in width. It has a fall from north to
"south in its upper half at the rate of about 2 feet per mile.
"From west to east the ground rises from the Kumla to the
"Bulan, and then falls from the Bulan to the Kosi. Thus
"the Bulan, which is the central and the largest of about a
"dozen streams which intersect the district from north to

"south, runs along the summit of two great plains which "slope from it downwards towards the two marginal rivers. "There is a counterslope inland for a few miles from the Kosi, "but little or none from the Kumla."

The levels taken showed that the lowest low water level of the Kosi was only 5 to 6 feet below the surface of the country. As regards alterations in the course of the stream, Colonel Haig wrote:—"At the frontier its present channel is "now 2 miles to the west of what it was in 1844 when the "maps were made, and further down the main stream now flows "in a channel from 4 to 6 miles west of its former course."

Since 1876 many further changes have occurred and the stream is unstable in the highest degree. The Kosi when in flood carries immense quantities of silt, consisting largely of micaceous sand, which it spreads over the country. In 1894 it was feared that the stream was showing a tendency to leave altogether the channel in which it was at that time flowing, and to work back to some previous course much to the east, which would endanger the Civil Station of Purnea.

In January 1895 I was deputed to examine the channels of the river at the point where it enters our territory, and for a short distance within the Nepalese territory. I quote the following from the report I made:—"The first thing that "strikes one on entering Nepalese territory at Patherdewa "is the enormous deposit of silt, chiefly mica sand, which has "been laid over the ground in the last few years. I think I "am within the mark when I say that the whole country from "the frontier up to Bubia has been raised two feet. I camped "at Sinoo-ari, where the huts of the village, which has been "almost abandoned, were filled with sand to this extent."

It was most remarkable to find large areas of country on which the Sâl trees and large Cotton trees had been killed by the silt. This, in turn, is soon covered by dense grass jungle of great height, and these jungles are well known as the homes of tigers. The impression is given that the river must be engaged in cutting out for itself a channel through some former deposit of silt within the hills, and appearances give strong support to the view taken by Captain Hirst that the Kosi, as a stream of its present volume, is of very recent date, and that very many years must elapse before we can hope for even a moderately stable channel in the plains. At the same time it does not seem to be probable that the stream will make any sudden change from the general direction of its present course. I venture to quote again from my report of 1895:—"When we consider that the spill water is flowing "in a much shallower channel than the main stream, and that "it is much more obstructed by grass jungle, the danger which "has been apprehended of a new river forming will, I think, 'have a less formidable aspect. A fall of 3 or $3\frac{1}{2}$ feet per

"mile is no doubt sufficient to cause a great velocity if a "stream is flowing 20 or 30 feet deep, but it is nothing very "terrible if it is flowing 5 or 6 feet deep. But there is no "doubt that the most important factor in the situation is the "amount of silt carried. While the stream is fully charged "with silt it cannot erode. The silt causes the evil of a "shallow river constantly changing its course, but it seems to "me also to set a limit to the extent of the change, or, at all "events to tend to prevent a sudden change to a side channel. "Thus, we find that proceeding along the spill from Bubia "and Hurinugra to Patherdewa, there has been practically "no erosion. The spill channels have banks, but these are "entirely composed of the recent silt deposit. In going "down the stream now flowing from Bubia, in a small boat, "we frequently grounded on the small bunds of rice fields. "and the water was simply flowing over the country between "banks of silt. It is only when we get down to Sahibganj "and Patherdewa that the erosion commences."

To allow of marginal flood banks being used with any chance of success there must be a main channel which is fairly stable or which only oscillates within moderate limits. This at present is far from being the case with the Kosi.

Captain Hirst has suggested that the Italian system of 'Bonificazione' might, possibly, be effective if applied to the Kosi. There is nothing novel in this system, and it hardly seems necessary to have resource to Italian in order to give it a name. In my dictionary (Chambers' Twentieth Century) one meaning of the verb 'to warp' is:—"To improve land by distributing on it by means of embankments, canals, flood gates, etc., the alluvial mud brought down by rivers."

Lands have been improved in England by warping, but, perhaps, the best known instance is the basin system of irrigation in Egypt, by means of which the fertile Nile mud is deposited in the basins and the water is then run off. To a small extent there is the same action during the irrigation of rice from the Bengal canals, but here we can only apply the water when it is holding a moderate quantity of silt. At times of high flood when the water is fully charged, we have to shut down for fear of choking the canals. Nature is, of course, acting in this manner on an enormous scale in the delta of the combined Ganges and Brahmaputra, and is constantly forming, removing and again reforming land. In Orissa, in the Puri district, Nature supplies two very good object lessons in the Chilka Lake and the Sur Lake. These basins receive flood water from two of the branches into which the Mahanadi divides. The outlet of the Chilka Lake is to the sea, while in the case of the Sur Lake the water flows back, at the end of the flood season, by the same channel by which it entered. In either case, the silt has been deposited on the

bed of the Lake, and the process of warping, or land formation, is going on steadily though very slowly. There are, I have no doubt, many places in Bengal, such as the tract inundated by the Damodar, and the flooded part of the Midnapur District, where, by means of embankments, it might be quite practicable to form silting basins somewhat similar to those on the Nile. The nature or composition of the silt is, however, a very important consideration. To give any reasonable chance of success continuity of action is essential, and this can only be obtained where we have stable channels and fixed positions for the overflow of the flood. I am afraid, therefore, that in the present state of the Kosi and for many years to come, little will be possible in this direction.

The last question noticed by Captain Hirst is the desirability of improving the navigable channels of the Ganges and Brahmaputra, and he advocates that the work required should be done by the State as a charge against the general revenues, and without requiring a direct return in the shape of tolls.

Some experimental work has been carried out in recent years by the Bengal Government on the Ganges between Patna and Damukdia, which showed that a good deal might be done by the use of bandals, at a comparatively small cost, to improve the channels in the season of low water.

Dredging is expensive, and it seems advisable to resort to it only when there is some very special reason and when the volume of traffic is great.

Regarding the financial problem, if it is held, as a general principle, that the provision of traffic facilities is of so great importance to a country as to warrant the use of general revenues without expecting any direct return for the outlay, it is not apparent that there should be any distinction between roads, railways, waterways, and, perhaps, in the future, air-ways. At present roads are provided in India partly at the cost of the general tax-payer, and mainly from the proceeds of a local rate or cess paid by the owners and occupiers of land. All traffic passes, as a rule, free of toll though there are some local charges for ferries and bridges. In the case of railways, a fair commercial profit is expected on the whole capital, though in the case of some of the lines owned by Companies, the land has been provided at the expense of the tax-payer. There are, no doubt, cases, of which the Assam-Bengal Railway is the leading example, in which the net receipts do not meet a fair interest charge on the capital, but, taken as a whole, the amount paid directly by the traffic passing over the Indian railways does now, ordinarily, yield a moderate profit after paying all charges, including interest on loans.

For ocean traffic, the sea is, of course, free of tolls, but there are charges for light-houses, and harbour facilities have

to be paid for those using them, though, no doubt, in some cases, contributions have been given from general revenues.

On inland waterways, large sums have been spent on works, such as the Orissa Coast Canal in Bengal, the Buckingham Canal in Madras, and in making the main branches of Irrigation Canal systems navigable, from which little or no direct return is obtained. What the indirect return may be, or what addition to the general assets of the country is made by such works, it is hard to say.

The questions raised are wide and complex, and I can make no attempt to answer them. I think, however, that it is desirable to be cautious in applying to India methods which are recommended solely, or mainly, on the ground that they have been adopted with apparent success in Europe or America. If we think of what has been done in India in the last fifty years in the matter of roads, railways, canals, harbour works, post offices and telegraphs, let alone education and law, we must realise that an enormous change has occurred in the economic condition of the country. It seems to me that the general levelling up and stiffening of the prices of the staples of food, which has been so marked of late, must be due, in part at all events, to the facilities for communication and trade which have been given. A change of this extent in the economic conditions must re-act on the social conditions. We are rather given, as a people, to consider that we are past masters in the art of self-government, but, when we think of the difficulties we have at home in dealing with the poor, and of the wonderful manner in which this is dealt with in India by the people themselves, we must confess that we have to learn as well as to teach. The general rise in the price of grain should help the cultivators, and it will be met by increased wages for the earning classes. This must, however, tend to draw a sharper line between the well-to-do, or perhaps, we should rather say, between those who have sufficient to live on and the very poor. Think of the vast numbers there must be in India of the crippled, the halt and the blind, the fatherless children and widows, who cannot work and who depend solely on charity. This charity has been freely given while the cost of food has been small and the general standard of living very simple. Will it be as freely given under the altered economic conditions? I suppose that we cannot tell, but sometimes it seems to me that we begin to see looming in the distance the spectres of Poor Laws and Old Age Pensions.

However, this is taking us far from the water-ways of Bengal, and I will conclude by saying that I think that we should not mind if we are reproached with lagging behind Europe or America, and that our motto should be "*Festina lente.*"

37. Reference to Babylon in the Rigveda.

By A. C. Sen, M.A., M.R.A.C.

In my paper on "*Viṣṇu*" I have shown that the *trivikramaṇa* —striding three times—of *Viṣṇu*, as mentioned in the Rigveda, and Yima's taking forward three steps—*thri-gāya*—as described in the Avesta (Vendidad-Fargard II), both represent the same historical incident, namely, the immigration of the ancestors of the Parsis and of the Hindus from their old home in the north to the land of the *Sapta Sindhus*. I have also pointed out that the Vedic *Yama* and *Viṣṇu* are the same character. According to the Avesta, *Yama* was a great Iranian King who had even *daevas* (= worshippers of *devās*) among his subjects. For a long time he ruled with justice and wisdom, and the country flourished under his beneficent administration. But latterly he became arrogant and untruthful and met with the fate that pride always brings. When he began to find delight in pride and falsehood the heavenly glory fled from him. He was overthrown and cut in twain by Azi Dahāka, with whom one of his brothers, Spityura, had joined. Azi Dahāka (Vedic, Dās Ahi) has been repeatedly mentioned in the Rigveda in connection with the winning of waters by *Indra*. But for a long time I did not meet with any reference in it to this mournful incident. I found instead that the Vedic *Ṛiṣis* have highly magnified and spiritualized the death of *Yama* as the following beautiful *ṛik* will show :—

देवेभ्यः कमवृणीत मृत्युं प्रजायै कममृतं नावृणीत ।
बृहस्पतिं यज्ञमकृण्वत ऋषिं प्रियां यमस्तन्वं प्रारिरेचीत् ॥
१० ॥ १३ । ४

Who for the sake of the gods (*i.e.* to be with the gods) chose death ; who chose not deathlessness for the sake of men (*i.e.* to stay with men).

Ṛiṣi Bṛihaspati founded the institute of sacrifice; *Yama* gave his dear body as an offering. x. 13. 4.

Some time after, I came across a curious story told of *Viṣṇu* in the *Çatapatha Brāhmaṇa* which bears so great a resemblance to the account of the death of *Yama*, as given in the Zamyad Yast, that it should be regarded as simply another version of it. It says that *Viṣṇu* by the performance of great sacrifices became the most excellent of gods. But after a time he lost self-control and became arrogant. The gods grew envious of him and wanted to kill him but they did not dare to do

so. One day *Viṣṇu* was asleep resting his head on the end of his bow when the gods entered into an arrangement with the ants who gnawed off the bow-string. The ends of the bow sprang asunder and *Viṣṇu's* head was cut off. Indra among the gods first reached the dead body of *Viṣṇu* and the glory of *Viṣṇu* entered into him. The severed head of *Viṣṇu* became the Sun.

According to the Avesta the heavenly glory of Yima left him and passed first to Mitra (=Sun) and then to Thrætaona (=the son of Thrita, Sn. *Trita*). It may also be mentioned here, that according to the legendary history of Persia, Djemshed (=King Yima) was seized unawares and sawn asunder.

The two accounts of the death of *Yama*—one given in the Avesta and the other in the Ç.B.—differ only on two points:

1°. The Avesta says that *Yama* was killed by Azi Dahāka and his followers. According to the Ç.B. *Yama*'s head was cut off by the *Vamrīs*, generally understood to be the females of a species of ant known as उपदीका।

2°. The glory of *Yama* according to the Ç.B. passed to *Indra*, and according to the Avesta to the son of *Trita*. As to its passing to the sun both scriptures agree, only the languages used by them differ. The Avesta says the glory passed to Mitra (=the Sun). According to the Ç.B., the severed head of *Yama* became the Sun.

Now as regards 2° the students of the Rigveda know that *Trita* was the original of the Vedic character *Indra*. And in my papers on "*Viṣṇu*" and "*Trita*," I have pointed out that in a number of places an act that the Rigveda ascribes to the father, the Avesta ascribes to the son, and *vice versa*. On this point therefore there is no real difference.

On the first view 1° seems to be an important difference But on a closer consideration this difference also vanishes away. In the Avesta Azi Dahāka is said to have come from Babylon. The phonetic rendering of the name of Babylon as given in the cuneiform writings is "Babli." The word in the Avesta is "*Bawli.*" Now "*Babli*," "*Bawli*" and "*Vamrī*" (वम्री) are the same word in three different languages.

First as to "*Babli*" (*Cun.*) and "*Bawri*" (*Zn.*) we find here two differences:

a°. In place of *b* in *Cun.* we have *w* in *Zn.*

b°. In place of *l* we have *r*.

a°. In the *Zn.* internal *b* and *w* are sometimes interchangeable.

b°. In the *Zn.* there is only one liquid *r* which is used both for *r* and *l*.

Next let us compare *Cun.* "Babli" with Sn. "Vamrī." Here we have the following differences:

a°. म for ब .

b°. ब for व.

c°. र for ल.

d°. final ं for ्.

a°. In the Sn. व and ब are often interchangeable. When a word is taken from a foreign language व is often used for ब.

b°. Here व has first been substituted for ब and then म for व. *Yāska* has pointed out in his *Nirukta* that व and म are sometimes interchangeable.

c°. In Sn. there are two liquids र and ल, but in Vedic Sn. र is often used in place of ल. Examples—

आरिख for आलिख;

रिहति for लिहति;

चरह्वन for चलह्वन।

d°. This is not of much importance but I shall explain it later on.

We may also compare the Zn. "*Bawri*" with Sn. बब्बरी though this is not of much importance. For it is not likely that the Sn. name for Babylon came through its Zn. name. Here the differences are:

a°. व for ब.

b°. म for w.

c°. ं for ्.

a°. has already been explained.

b°. The *w* is a substitute for *b*. It may be considered as equivalent to *v* or *u*, and *u* in Zn. sometimes = म in Sn., *e.g.* Zn गुफ = Sn. गम्भीर [Prof. Jackson in the A. O. S's J.]

c°. This will be dealt with later on.

Next as to the ants being of the species called उपदीका This word is evidently derived from उप near and उदक water, meaning those who live near water. The geographical position of the city of Babylon fully explains this. The word may also contain an allusion to the blocking of a river by Ahi—repeatedly mentioned in the Rigveda in connection with the winning of waters by *Indra*.

When the word बब्बरी in the Ç.B. was thus explained I wanted to see if the word occurs in the Rigveda, and if so, if here also it means Babylon. I believe I have met with quite an astonishing result. In the Rigveda the word occurs only once. namely, in *ṛik* iv. 19. 9. It will be seen that the *ṛik* has not been properly explained yet and has rightly been pronounced obscure. I quote the *ṛik* below, and also some of the explanations already given.

वम्रीभिः पुत्रमग्रुवो अदानं निवेशनाद्धरिव आ जभर्थ।
व्यंधो अख्यदहिमाददानो निर्भूदुखच्छित्समरन्त पर्व ॥ ४ । १९ । ९

1. Sāyaṇa explains the *ṛik* thus:

O *Indra*, master of horses named *Haris*, you brought away from the ant-hill the son of the woman *Agrū*, who was being eaten by the ants.

Brought away by *Indra* he saw the serpent clearly though he had been blind before. Then he came out of the ant-hills. His limbs that had cut through the ant-hills were united through the favour of *Indra*.

2. The Sanskrit explanation in the "*Vedarthayatna*" is the same as *Sāyaṇa*'s, but in the English translation निवेशन has been rendered into "Camp." I give the English translation below—

"Thou didst bring out from the camp, O master of tawny horses, the son of *Agru* that was being eaten by the ants. The blind man [when] brought out saw the serpent. He came out. The limbs that broke the cooking-pot were joined again."

3. Mr. R. C. Dutt in his Bengali translation has rendered निवेशन into गृह, *i.e.*, house. He has also taken उखच्छिद्पर्व in the sense of limbs severed by the ants.

4. The late Pandit Dayānanda Sarasvati explained the *ṛik* in an altogether different way. According to him *Indra* takes away one's uncharitable son as the rivers wash away their banks.

5. Griffiths' translation is as follows :—

"Lord of Bay Steeds, thou broughtest from the ant-hill the unwedded damsel's son whom ants were eating.

The blind saw clearly, as he grasped the serpent, rose, brake the jar : his joints again united."

It cannot be said that these translations make much sense. For what does "a man being eaten by the ants" mean? Pandit D. S's explanation is of such a character that we had better leave it alone. Then what has the cooking-pot to do with the incident? And if it were the pot that was broken it was the broken parts of the pot and not of the limbs of *Agrū*'s son that needed to be reunited. Mr. Dutt removes this absurdity but by quite arbitrarily rendering उखच्छिद् into वधीभिः क्षिप्रं.

M. Williams in his "Sanskrit-English Dictionary" explains उखच्छिद् as "as fragile as a pot', which he takes from Bohtlingk's "New Dictionary." This is another arbitrary explanation.

The *ṛik* of which we seek the true explanation occurs in an *Indra* Hymn consisting of 11 stanzas, of which it is the ninth. The Hymn is in the fourth *Mandala* of which *Ṛiṣi Vāmdeva* is the author. To understand the true meaning of the *ṛik* in question not only we should know the *ṛiks* that precede and follow, but also the special relation between the author and the god glorified. The tradition preserved in the Upaniṣads says

that *Vāmdeva* was the most spiritually enlightened among the Vedic *Ṛiṣis*. He has himself related the relation that *Indra* bore to him in the following extremely pathetic verse which will also show that for the glorification of *Indra* his friend and saviour he would not conceal anything.

अवर्त्या शुन आन्त्राणि पेचे न देवेषु विविदे मर्डितारं ।
अपश्यं जायाममहीयमानामधा मे श्येनो मध्वा जभार ॥४। १८। १३

In great distress I cooked the intestines of a dog; among the gods I found no comforter ;
I saw my wife insulted. Then the Eagle (= *Indra*) brought to me the nectar, iv. 18. 13.

I give below first the whole of hymn iv. 19, with the exception of *ṛik* 9.

एवा त्वामिन्द्र वज्रिन्नत्र विश्वे देवासः सुहवास ऊमाः ।
महामुभे रोदसी वृद्धमञ्वं निरेकमिद्भृणते वृत्रहत्ये ॥ ४ । १९ । १

Thee verily here, O *Indra*, the wielder of the thunder, the All-gods, the protectors easy to invoke,
And both the Heaven and the Earth elected the mighty one grown strong and beautiful—thee alone to slay *Vṛitra*, iv. 19-1.

अवास्रजन्त जिव्रयो न देवा भुवः सम्राळिन्द्र सत्ययोनिः ।
अहन्नहिं परिशयानमर्णः प्र वर्त्तनीररदो विश्वधेनाः ॥ २

The gods sent thee forward as old (fathers send their young sons). Thou *Indra* born of truth (then) becamest the One Lord of all.

Thou slewest Ahi who lay over waters and set free the streams that gladden all, 2.

अत्यंशुवन्तं वियतमबुध्यमबुध्यमानं सुषुवाणमिन्द्र ।
सप्त प्रति प्रवत आशयानमहिं वज्रेण वि रिणा अपर्वन् ॥ ३

The insatiate, long stretched, hard to waken, unwaking, slumbering Ahi who lay over the seven rivers, thou cuttest up with thine bolt, in the jointless part, O *Indra*, 3.

अत्योदयच्छवसा क्षामं बुध्नं वार्णं वातस्तविषीभिरिन्द्रः ।
दृळ्हा न्यौभ्नादुशमान ओजोऽवाभिनत्कुभः पर्वतानां ॥ ४

With might *Indra* pulverized the back of the earth as the wind with powers does the water.
Indra wishing to exhibit his strength broke the hardest mountain and pierced the wings of the clouds, 4.

अभि प्र दद्रुर्जनयो न गर्भं रथा इव प्र ययुः साकमद्रयः ।
अतर्पयो विसृत उज्ज ऊर्मींन्वं वृताँ अरिणा इन्द्र सिन्धून् ॥ ५

They ran to thee like mothers to their children; the Destroyers (=the *Maruts*) together went to thee like chariots.

Thou didst gladden the streams and raise the waves. Thou, O *Indra*, didst set free the encompassed rivers, 5.

त्वं महीमवनिं विश्वधेनां तुर्वीतये वय्याय क्षरन्तीं ।
अरमयो नमसैजदर्णः सुतरणाँ अक्षणोरिन्द्र सिन्धून् ॥ ६

Thou didst stay the mighty stream flowing and delighting all, for *Turbiti* and *Vayyu*;

At their prayer didst thou stop the rushing streams and madest the rivers easily fordable, O *Indra*, 6.

प्राग्रुवो नभन्वो न वक्वा ध्वसा अपिन्वद्यवतीर्ऋतज्ञाः ।
धन्वान्यजाँ अपृणत्पयाणाँ अधोगिन्द्रः स्तर्यो दंसुपत्नीः ॥ ७

He made the young maidens (=rivers), that know the laws, flow forth destroying the banks like roaring springs.

He flooded the thirsty deserts and plains. *Indra* milked the dry cows (=rivers), the wives of the stinging one (=Ahi). 7.

Remarks: Differing from the *Padapāṭh* I have divided दंसुपत्नीः into दंसु + पत्नीः instead of दस् + सुपत्नीः। In Zend, Dahāka (S. *Dāsa*) means one who stings. The word has been given this meaning because the name of the Dahāka or *Dāsa* in question is Azi (Zn) or Ahi (Sn.), which in these languages means a serpent. We will afterwards see that "*Ahi*" is an Assyrian word and in that language means "a brother."

पूर्वीरुषसः शुरदश्च गूर्ता वृत्रं जघन्वाँ असृजद्वि सिन्धून् ।
परिष्ठिता अतृणद्बद्बधानाः सीरा इन्द्रः स्रवितवे पृथिव्या ॥ ८

After many a dawn and many a lovely autumn having killed *Vṛitra* he let the rivers flow;

Indra set free the encompassed and blocked rivers to flow on earth, 8

प्र ते पूर्वाणि करणानि विप्राविदाँ आह विदुषे करांसि ।
यथा यथा वृष्ण्यानि स्वगूर्तापांसि राजन्नर्यावियेषीः ॥ १०

One who knows thy ancient exploits, O sage (=*Indra*), has told them to the wise,

Exactly as you performed the manly self-proclaimed deeds beneficent to man. 10.

नू ष्टुत इन्द्र नू गृणान इषं जरित्रे नद्यो न पीपेः ।
अकारि ते हरिवो ब्रह्म नव्यं धिया स्याम रथ्यः सदासाः ॥ ११

Now glorified, praised, O *Indra*, let wealth swell like rivers for your praiser;

New hymn, O *Indra*, has been composed for you. May we through your praise be always possessors of chariots and winners in battles. 11.

From the above it will be seen that all the *riks* preceding the one under discussion refer either to the killing of Ahi (*Vritra*) or to the setting free of rivers. Of the two *riks* that follow, the last or the 11th is simply a prayer for wealth. But even here rivers are once mentioned as a simile. The 10th ṛik expressly mentions that the object of the Hymn was to relate truly the ancient exploits of *Indra* exactly as they happened यथा यथा, and the poet says he knows these. There is a word in this *ṛik*, namely दृषण्वानि, which, following the Western scholars, I have rendered into "manly" but which literally means "relating to the pouring of water." It is therefore likely that *ṛik* 9 should also have something to do with *Indra*'s killing Ahi and releasing the river the latter had blocked. And as a matter of fact the word Ahi occurs in this *ṛik*. In two of the previous *ṛiks* in this hymn, namely, in the 2nd and the 3rd in which the word occurs, it means *Vṛitra*, *i.e.* the river encompassing Ahi. I maintain that in this *ṛik* also Ahi means *Vṛitra* and not an ordinary serpent.

I shall now give my translation of the *ṛik* and then its explanation, together with the explanation of all the difficult words in it.

Thou broughtest away, O lord of the tawny steeds, the son of the river maiden [or the unmarried damsel] who was being eaten by the Babylonians, from where he was lying.

Brought away he saw Ahi though he had been blind. When released his limbs severed by the file were reunited. iv. 19. 9.

The most difficult words in the *ṛik* are the following:—

1°. वचौ—I have already pointed out that it is equivalent to "*Babli*", the name of Babylon according to the cuneiform writings, or to "*Bawri*", the name of the same according to the Avesta. I take it up again. It appears that there is a word "वच" occurring in the Rigveda and derived probably from an old root वच् to vomit, to bring out from the mouth, to speak, common to a number of Aryan languages—Sanskrit, Greek, Latin, Lithunian and Zend. It occurs in five places in the Rigveda, namely, as

वचः in i. 51 and viii. 102. 21.

वचकः in x. 99. 12.

वचं in i. 112. 15.

वचस्य in x. 99. 5.

In all the *riks* excepting in viii. 102. 21 वच is the utterer of hymns, *i.e.*, a *Risi*. In viii. 102. 21 it is an ant. वचौ is the female

gender of वध्, a female ant. It appears that the word has another female gender, namely, वध्या। I am inclined to think that originally वध्या was the only form of the female gender of the word. But when the *Ṛiṣis* came in contact with the Babylonians and the necessity arose of having a name for them, they took an old word, and giving it a little twist coined a new one, which from one point of veiw was merely a new form of its female gender and from another point of view the name of Babylon, "*Babli*" *Sanskṛitized.* This gave them an opportunity to play on the two meanings of the word वध्री and also mysteriously mention a historical fact which for obvious reasons they would not refer plainly. There can be no doubt that the fact would not have been mentioned even mysteriously had not the great attachment of *Ṛiṣi Vāmadev* for god *Indra* induced him to refer to it for the glorification of that great god and to describe his exploits exactly as they happened. *Indra* slew Ahi who had most cruelly put to death such an eminent person as King *Yama.* Indra also made *Yama* a great god.

The punning on the word वध्री is this. Taking *Vamrīs* in the sense of ants, the *ṛik* says that when grown arrogant even so great a king as *Yama* was killed by the female *Upadika* ants. In another sense it means that he was killed by the Babylonians under Ahi. The Iranian *Ṛiṣis* expressed their scorn by calling Ahi, Dahāka—little bit of a Dās.

It is to be noticed that the explanation given above shows also why the final *i* in "*Babli*" has been changed into *ī.*

2°. अयु. The word occurs in 11 places in the Rigveda, namely, as

अयुः in v. 44. 7. m. nom. sing.—unmarried.
अयवः in vii. 96. 4. m. nom. pl.—unmarried.
अयुवः in vii. 2. 5. fem. nom. pl.—maidens.
—— in i. 140. 8 fem. nom. pl.—fingers as maidens.
—— in iii. 29. 13. fem. nom. pl.—fingers as maidens.
—— in ix. 1. 8. fem. nom. pl.—fingers as maidens.
—— in ix. 66. 9 fem. nom. pl.—fingers as maidens.
—— in i. 191. 14. fem. nom. pl.—Rivers as maidens.
—— in iv. 19. 7. fem. nom. pl.—Rivers as maidens.
—— in iv. 19. 9. fem. gen. sing.—A particular maiden.
—— in iv. 30. 16. fem. gen. sing.—A particular maiden.

The above shows that the primary meaning of the word is unmarried. अयु male is a bachelor; अयू female a maiden Fingers and rivers have been called अयुवः poetically. They have similarly been called जामयः।

Sāyaṇa is right in saying that in ṛiks iv. 19. 9 and iv. 30. 16 the word refers to a particular woman—a maiden—a chaste lady; but he has not tried to identify her. Through the clue we have found in connection with the word **वधो**, however, it will be possible for us to say who she was. If our interpretation of this word be true then the **अयुवः पुत्रं** in ṛik iv. 19. 9 is *Yama*, and therefore **अयू** is her mother. It appears that *Ṛiṣi Vāmadeva* has used the word in three places, namely, in *ṛiks* iv. 19. 7; iv. 19. 9 and iv. 30. 16. In the last two of these *ṛiks* the word evidently means the same thing. In the first *ṛik* the word means rivers – rivers regarded as young maids. *Riks* iv. 19. 7 and iv. 19. 9 are not only in the same hymn but only a single *ṛik* separates them one from the other. The meaning of the word **अयू** in *rik* iv. 19. 9 is therefore likely to be the same as in iv. 19. 7, *i.e.*, a young river regarded as a maiden. Moreover the whole hymn is on the exploits of *Indra* with regard to rivers. But does this make any sense—a young river maiden being the mother of *Yama*? It does if we remember that *Yama*'s mother—the wife of the great *Vivasvān*—**यमस्य माता...मही जाया विवस्वतो...** (x. 17. 1) was called **सरण्यू** (from **सृ** to flow), a river. She was so called because her husband *Vivasvān* had a good knowledge of rivers, which led to our Aryan forefathers coming to India and settling on the banks of the Indus:

ऋतेन यन्तो अधि सिन्धुमस्थुर्विदद्गन्धर्वो अमृतानि नाम ॥

१० । १२३ । ४

They (=the sages=**विप्राः** of the first line) going in the right direction settled on the banks of the *Sindhus*. *Gandharva* (=King *Vivasvān*) knew the names of the waters (=rivers). x. 123. 4.

It appears that *Saraṇyū* has also been called *Sindhu*. Her twin sons the *Açvins* have been called *Sindhu-Mātarā*—the twins having *Sindhu* for their mother. [*Açvins* are brothers of *Yama* and sons of *Saraṇyū* x. 17. 2.] Now we find she has also been called **अयू** river maiden. Her son **अयुवः पुत्रः** is *Yama*.

From the facts (1) that in *ṛik* x. 17. 1 *Yama*'s mother—the wife of mighty *Vivasvān*—has been said to have died or disappeared while *being married* and not *after marriage*—**यमस्य माता पर्युह्यमाना मही जाया विवस्वतो ननाशः**; (2) that in Hymn x. 95 we have an instance of an *Apsarā* living with a king till a son is born unto them and then going away to live freely like a

bird; (3) and also that *Vivasvān* was the great *Gandharva*, and according to Manu (III. 32) the *Gandharva* form of marriage was simply the living together of a man and woman out of mutual attachment without undergoing any marriage ceremony;—*Yama*'s mother may be taken as literally अयू—an unmarried damsel. In either case *ṛiks* iv. 19. 9 and iv. 30. 16 refer to the death of *Yama*.

अयू in Zend also means unmarried; but its supposed derivation from अ without, and गए a husband, conveys too recent an idea to be the original.

3°. निवेशन means a house, a place on which anything rests, a camp (Manu). The *ṛik* makes very good sense if we take the word to mean "camp" as the editor of the *Vedarthayatna* has done, or the place where the severed body of *Yama* was lying.

4°. अहि = हत. In this sense the word has been used several times in Hymn IV. 19, namely, in *ṛiks* 2, 3, and 9.

5°. निर्ऋत् The ordinary grammar fails to derive it. Sāyaṇa makes it = निर्भूतः। He may be right, but what is the meaning of the word? I think the word means ceasing to exist—dying, ceasing to exist as a creature, *i e.*, as a being with a material body. But the *Ṛiṣis* believed that even after death men had bodies of a luminous character—the सूक्ष्म-देह of the later Upaniṣads.

6. उखच्छिद्. The explanation already given of this word is simply an absurdity. Whatever be the meaning of it one thing is clear. It is the पर्व, पर्वाणि limbs of the son of अय्र that were disunited—severed. For they are said to have been reunited through the favour of *Indra*—समरन्न। उखच्छिद् an adjective to पर्व, therefore, cannot mean the cutter of उखा as explained by Sāyaṇa. It must mean the limb or limbs (पर्व, पर्वाणि) cut up by उखा or उख whatever this word may mean. The word उखच्छिद् therefore should be taken as = उखच्छिन्न। Sāyaṇa has virtually done this while explaining समरन्न पर्व। Now the question is what is then उखा? Both the eastern and the western scholars have taken it for a pot—a boiling or cooking-pot. But if this be the meaning of the term उखा the compound word उखच्छिद् = उखच्छिन्न makes no sense. I think in the literary Sanskrit the meaning of उखा in the sense in which it has been used in the compound word उख च्छिद् has been lost. It appears, however, that in the ordinary dialect of Bengal the word उख or उखा has another meaning, namely, a file. I have pointed out in a little paper that

in some cases the sense in which words were used in the Rigveda, though lost in the literary Sanskrit, has been retained in the village dialects. Here is an example:

सं यं स्तुभोऽवनयो न यन्ति समुद्रं न स्रवतो रोधचक्राः ।
स विद्वाँ उभयं चष्टे अन्तर्बृहस्पतिस्तर आपश्च गृध्रः ॥ १।१९०।७

In the second line of this verse there occurs the word **तर**. The word has, it appears, lost the sense in which it is used here so far as the Sanskrit language is concerned, and commentators both of the east and of the west are at a loss what to make of it. The Dictionary meanings of the word are crossing a stream, a vessel, the ferry, etc., and these make no sense. But it so happens that the real meaning though lost in the literary language has been still retained in the popular dialects. Every man and woman of the Eastern Bengal know that **तर** means land —**तरेर पथ** (land route) is opposed to **जलेर पथ** (water-route). In the above *ṛik* **तरः** is opposed to **आपः**। The **आपः** here, as in many other places in the Rigveda, is the celestial sea. The **तर**: is the land of the earth. The line therefore may be translated thus:

He the learned *Bṛihaspati* placed between the earth and the celestial sea, like a vulture, sees them both. i. 190. 7.

उखच्छिद् in our *ṛik* makes good sense if **उख** or **उखा** be taken in its ordinary meaning of a file or a cutting instrument with teeth.

The meaning of *ṛik* iv. 19. 9 is therefore as follows:

Yama, the son of the river maiden *Saraṇyū* (or of the unmarried woman), was beheaded by the Babylonians under Ahi. But, through the kindness of *Indra*, after his death his limbs got reunited, and he became a god (the sun according to Ç.B.).

From other statements of the Rigveda we know that *Yama* offered his dear body as an oblation, discovered the path to the other world, and with the *Pitṛis* founded a Kingdom in the disc of the sun. *Cf.* my papers on "*Yama*" and "*Viṣṇu*."

That my interpretation of *ṛik* iv. 19. 9 is correct, follows from *ṛik* iv. 30. 16 the only other place in the Rigveda where the expression **पुत्रमग्रुवः** occurs. It should be noticed that this *ṛik* is also the composition of *Ṛiṣi Vamadeva*.

उत त्यं पुत्रमग्रुवः परावतः शतक्रतुः ।
उक्थेष्विन्द्र आभजत् ॥ ४ । ३० । १६

And to him—to *Agrū*'s son whose head had been cut off, O *Çatakratu*,
You gave a share in the hymns, O *Indra*. iv. 30. 16.

Giving a share in the hymns is a peculiar way of saying that, you made him a god.

I give below one or two additional arguments to show that the statements made in *ṛiks* iv. 19. 9 and iv. 30. 16, and the stories quoted from the Çatapatha Brāhmaṇa and the Avesta at the beginning of this paper, relate to historical facts and not to cosmical phenomena either of the atmosphere, as is generally believed, or of the terrestrial world as Hillebrandt maintains.

Ahi has been spoken of in the Avesta as well as in the Rigveda and the C.B. as a native of Babylon—expressly in the former, and in a mysterious way, peculiar to the vedic literature, in the latter. Ahi is generally believed to be a Dragon, whatever that may mean. In my paper on "*Trita*" I have pointed out that when after their death certain Aryan leaders were deified and translated to heaven some of the non-Aryan chiefs with whom they fought were likewise transferred there and made into more or less malignant demons of the upper region. Ahi was one of them. In confirmation of the human origin of Ahi, as stated in the Vedas and the Avesta, we find that in the lists of the Assyrian and the Babylonian Kings already made out, there are at least three names that end in the word "Ahi" namely—

Assur-nadin-Ahi i.
Assur-nadin-Ahi ii.
Merodach-nadin-Ahi.

The Ahi of the Rigveda and Avesta was a very much older king. His name and accounts of his fight with *Yama* and *Trita* may yet be brought to light when the oldest records of Babylon have been unearthed and deciphered.

According to the Rigveda Ahi was the son of *Danu*, and the *Danus* according to the Avesta were the *Turanians*. It is well known that the pre-Semitic Kings of Babylon were the Sumerians, a branch of the *Turanian* race who came from the highlands to the north-east of Chaldea.

Again, according to the Avesta, the river *Ranghā* had three tributaries, namely, the *Sanaka*, the *Aodha*, and the *Padvaepa*. From the Rigveda it appears that the *Ranghā* (Rigvedic Rasā) was a tributary to the Indus on the right side. The Rigveda does not give the tributaries of the *Rasā*. But it mentions the *Sanakās* as the followers of Ahi.

वधीर्हि दस्युं धनिनं घनेनँ एकश्चरन्नुपशाकेभिरिन्द्र ।
धनोरधि विषुणक्ते व्यायन्नयज्वानः सनकाः प्रेतिमीयः ॥ १ । ३३ । ४

You verily (O *Indra*) killed the wealthy *Dasyu* by your thunder, having gone to him alone, though your helpers (=the *Maruts*) were with you.

Come over his bow from all sides the unsacrificing Sanakās met with their death. i. 33. 4.

Ahi has been called a *Dasyu* and elsewhere a *Dās* (Zn. Dahāka). These terms indicate that he was a non-Aryan. His

followers the *Sanakās* have been called अयज्वानः unsacrificing. This is also one of the terms repeatedly used in the Rigveda as an epithet to the non-Aryans with whom the *Ṛiṣis* came in contact while settling in the land of the *Sapta Sindus*. The *Sanakās* were probably a non-Aryan tribe living on the banks of the *Sanakā*, a tributary to the *Rasā*.

In the VIII *Mandala* mention is made of a golden coin called "*mana*" which is a well-known Babylonian coin.

आ नोभर व्यञ्जनं गामश्वमभ्यञ्जनं ।
सचा मना हिरण्यया ॥ ८ । ७८ । २

Bring us ornaments, cattle, horses and perfumes; with golden manās (O *Indra*). viii. $\frac{78}{67}$. 2.

In the same *Mandala* mention is made of the country anciently known as रुम (Ruma).

यद्वा रुमे रुशमे श्यावके कृप इन्द्र मादयसे सचा ।
कण्वासस्त्वा ब्रह्मभिः स्तोमवाहस इन्द्रा यच्छन्त्या गहि ॥ ८ । ४ । २

Or, O *Indra*, if you are regaling yourself in *Ruma*, *Ruçama*, *Çyāvaka*, *Kṛipa*,

Still the *Kanvas*, the Carriers of Hymns, are bringing to you praises, O *Indra*, come. viii. 4. 2.

The *Ruma*, *Ruçama*, etc., here are either places or peoples of these places. Of *Ruçama* we have in *Ruçama* (viii. 4. 2; 51. 9); the *Ruçamas* (v. 30. 12 & 13); of the *Ruçamas* (v. 30. 14); and among the *Ruçamas* (v. 30. 13).

The name *Ruma* occurs also in the Avesta and is supposed to be Western Asia. In this connection we may notice the recent discoveries at Tel-el-Amarna. These show that about 1600 B.C. kings with Hindu names and worshipping *Mitrā-Varuṇa*, *Indra* and *Nāsatya* ruled in Mitani. The names *Ārta-suvara*, *Ārta-tama* should be compared with *Ārta-bhāgo*—the name of a contemporary of *Yājnavalkya* and not with that of *Ārta-Xerxes* and *Ārta-phernes*. For not only are the former names pure Sanskrit, which these are not, but also had the kings been Iranians instead of *Nāsatya* we would have got *Nāhatya*. Moreover the Iranians instead of adoring the gods *Indra* and *Nāsatya* abhorred and detested them.

NOVEMBER, 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 3rd November, 1909, at 9-15 P.M.

HARINATH DE, ESQ., M.A., in the chair.

The following members were present:—

Babu Rakal Das Banerji, Babu Monmohan Chakravarti, Mr. B. L. Chaudhuri, Dr. E. P. Harrison, Mr. D. Hooper, Prof. E. Sommerfeldt, Mr. G. H. Tipper, Rev. A. W. Young.

The minutes of the last meeting were read and confirmed.

Four presentations were announced.

The General Secretary reported that Dr. T. Bloch and Dr. Priyanath Sen were dead.

The following four gentlemen were ballotted for as Ordinary Members:—

Babu Mriyunjoy Roychaudhury, proposed by Babu Rakhal Das Banerji, seconded by Mr. G. H. Tipper; *Mr. Emanuel Mano Löffler*, Journalist, Darjeeling, proposed by Maulvi Abdul Wali, seconded by Mr. G. H. Tipper; *Major C. Donovan*, I.M.S., Physician to the Madras General Hospital, proposed by Major L. Rogers, I.M.S., seconded by Lieut-Col. F. P. Maynard, I.M.S.; *Captain S. R. Christophers*, I.M.S., Central Research Laboratory, Kasauli, proposed by Major L. Rogers, I.M.S., seconded by Lieut.-Col. F. P. Maynard, I.M.S.

The following papers were read:—

1. *On the Experimental Determination of the Electrochemical Equivalent of Nickel.—By* SURENDRANATH MITRA, M.A. *Communicated by* DR. E. P. HARRISON.

2. *The Song of the Bla'j Fair sung in Bla'j.—By* H. A. ROSE, I.C.S.

These papers will be published in a subsequent number of the *Journal*.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 10th November, 1909, at 9-30 P.M.

LIEUT.-COLONEL F. J. DRURY, I.M.S., in the chair.

The following members were present :—

Dr. U. N. Brahmachari, Dr. G. C. Chatterji, Captain F. P. Connor, I.M.S., Lieut.-Col. C. R. M. Green, I.M.S., Lieut.-Col. F. P. Maynard, I.M.S., Captain D. McCay, I.M.S., Captain J. W. D. Megaw, I.M.S., Dr. Indumadhab Mallick, Lieut.-Col. A. H. Nott, I.M.S., Dr. J. E. Panioty, Mr. M. J. Seth, Captain H. B. Steen, I.M.S., Major E. Wilkinson, I.M.S.

Visitors :—Mr. D. A. David and Babu B. D. Mukherji.

The Minutes of the last meeting were read and confirmed.

1. A case of Urticaria with marked Dermographism was shown by Dr. G. C. Chatterji.

2. A case of Syringomyelia was shown by Captain J. W. D. Megaw.

3. Some remarks on the Action of the salt content of the Blood Plasma on the Relative size of the Red Blood Corpuscles were made by Captain D. McCay, I.M.S. Dr. U. N. Brahmachari discussed the remarks.

4. Lieut.-Col. Drury, with the *approval* of the Meeting, postponed his Introductory statement on the Causation of Diseases of the Circulatory System in India.

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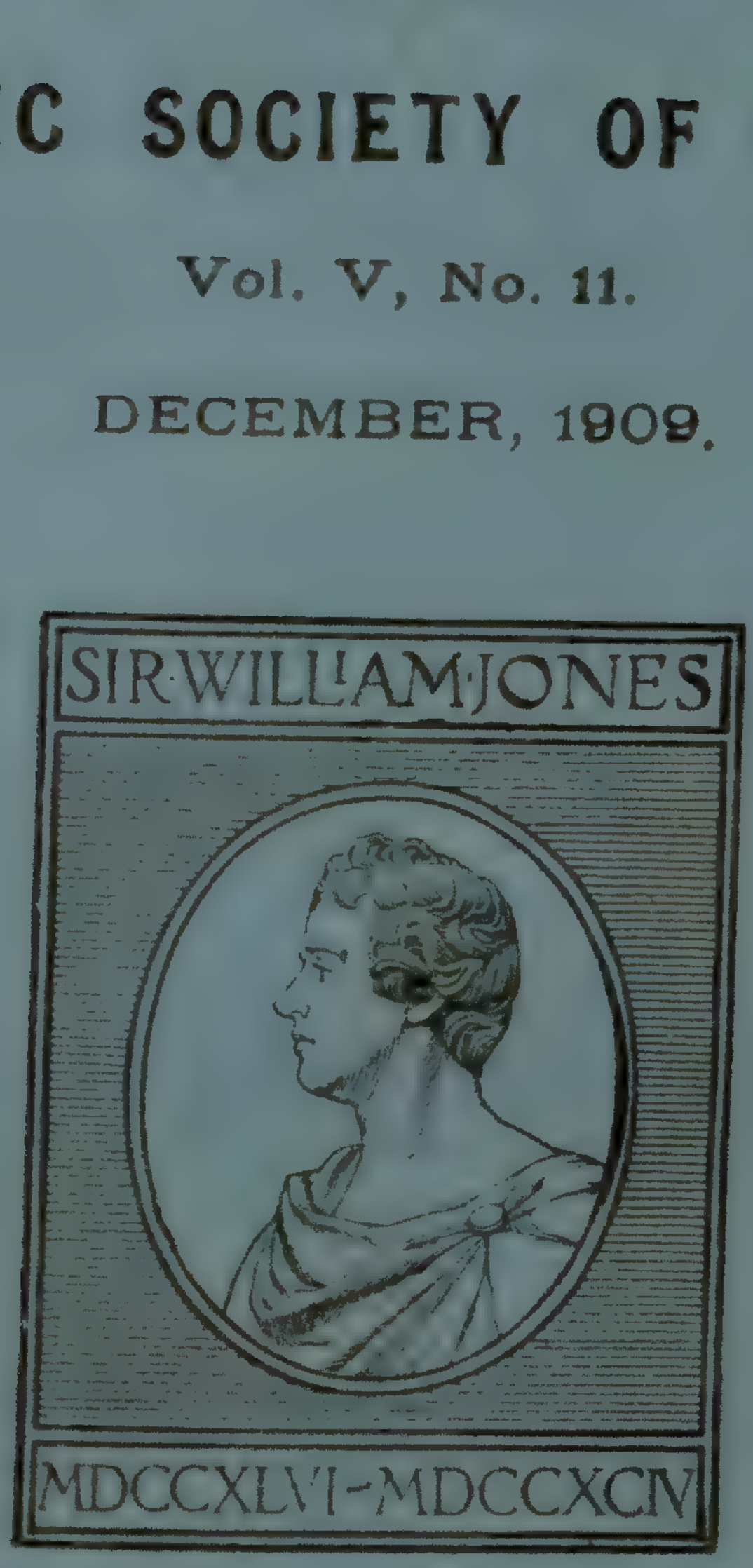

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38. The Rubā'īyāt of Abu Sa'īd ibn Abu'l Khayr.

Edited by Maulavi 'Abd'ul Wali.

PREFACE.

The genuine and widespread enthusiasm which FitzGerald's adaptation of 'Omar Khayyām's Rubā'īyāt into English verse gave rise to, may be ascribed why scholars have devoted so much of their attention to this particular branch of Iranian poetry. Like Mathnawī and Ghazal, Rubā'ī, too, owes its origin to the genius and character of the Persians. Known by various names, *e.g.*, Dū-baytī and Tarāna, the term Rubā'ī (quatrain) is one that is now exclusively used in preference to others.

While a host of writers have written on the life of the Astronomer-Poet of Nishāpūr, and his quatrains have been diligently collected, wherever they could be found, very little has been done with regard to the Rubā'īyāt of Shaykh Abu Sa'īd ibn Abu'l Khayr. We are indebted to Dr. Hermann Ethé, who in 1875 and 1878 published with metrical German translations, in the Sitzungsberichte der philosophisch-philologischen und historishen Classe derk. Akademik der Wissenschaften zu München, a few quatrains of Abu Sa'īd, which he extracted from various biographical works. These quatrains are more or less defective owing to the imperfection or untrustworthiness of the most of the MSS. of the Tadhkiras consulted by him. Besides Ethé, a few other scholars have also discussed the merits of Abu Sa'īd's quatrains; but owing, I believe, to the absence of a complete text of the Rubā'īyāt from European libraries, they have not yet been presented to the learned world in a systematic and collected form. I have, therefore, copied the text of the Rubā'īyāt from an excellent manuscript written in beautiful Shikasta character and preserved in the Library of the Asiatic Society of Bengal. Of the two manuscripts of Abu Sa'īd ibn Abu'l Khayr's Rubā'īyāt, one appears to have unfortunately been lost. The text of the quatrains is, therefore, copied from the only remaining manuscript (O. (*a*) 62) with which are bound some other manuscripts. I have also consulted a few available Tadhkiras and Dr. Ethé's extracts, and have removed so far as possible the errors that were detected. The manuscript of the Society is, on the whole, not only very beautifully and carefully written, but most accurately and intelligently prepared.

Of the author of the Rubā'īyāt I wish to say only a few words, as I reserve for a future occasion a prose translation in English of these celebrated quatrains, with notes and an account

of the life and times of the saint. Suffice it for the present to say that Shaykh Abu Sa'īd Fazl'ullāh was the son of Shaykh Abu'l Khayr, was born at Mahna in Khurāsān in 356 H., and died at an advanced age in 440 H. (967—1049 A.D.). While the Shaykh was a celebrated saint of the time, it appears that he often gave expression to his inward thoughts in verse of the kind known as Rubā'īyāt. These quatrains, as those of Abu Ismā'īl 'Abdu'llāh Anṣārī of Herāt and others, which were composed to express their theosophic feelings of human relation with the Universal Soul, have been found to be the most beautiful compositions of which the Persian language can deservedly boast. Converted to Ṣufīism by Luqmān Majnūn who led him by the hand and introduced him to Pīr Abu'l Fazl, the Shaykh at once imbibed the new spirit of Love and Renunciation with such devotion of which no parallel can be found outside the rank of the darvishes of his class. After the death of his spiritual guide, Shaykh Abu Sa'īd ibn Abu'l Khayr went to visit Shaykh Abu'l 'Abbās at Āmul, by whom he was afterwards robed with the saintly robe of the latter. Shaykh Abu Sa'īd's sayings are most instructive. One day he was told that so-and-so could walk on the water. The Shaykh replied that it was easy: the frog and the sparrow, too, could walk on the surface of the water. He was next told that so-and-so could fly in the air; the Shaykh replied that kites and flies also could do the same. He was told that so-and-so could go in a second from one town to another; he replied, that the Devil also could go from the east to the west. "These things," he said, "are not at all of value. He is the man who sits among other people, transacts business, contracts marriage, mixes with mankind, and yet be not for a single moment forgetful of his God." On another occasion, Shaykh Abu Sa'īd ibn Abu'l Khayr was asked as to the meaning of *Taṣawwuf*. His reply was: "Lay down what is in thy head, give away whatever is in thy hand, and do not flinch, whatever may come on thee." The Shaykh used to say that "the veil between man and God is neither earth or heaven, nor the *'Arsh* or the *Kursī* (Divine Throne and Chair), but thy egoism and vanity are the veil; have them taken off and thou wilt reach God."

رباعیّاتِ ابُو سعیدِ ابو الخیر

بسم اللـه الرحمـن الرحیم

رباعي — ۱

دنیا جم را و قیصـــر و خاقـــان را تسبیح ملک را و صفـــا رضـــوان را
دوزخ بـــد را بهشت مر نیـــکان را جانان ما را و جانِ ما جانـــان را

وله — ۲

پرسیـــدم ازو واسطهٔ هجـــران را گفتـــا سببی نیست بگویـــم آن را
من چشمِ تو ام اگر نه بینی چه عجب من جانِ تو ام کسے نه بیند جان را

وله — ۳

دی شانه زد آنماه خـــمِ گیسو را بر چهره نهـــاد زلفِ عنبـــر بو را
پوشیـــد بدینحیله رخِ نیکـــو را تا هر که نه محرم نشناســـد او را

وله — ۴

مستغرقِ نیلِ معصیت جامـــهٔ ما آرایشِ فعلِ زشت هنـــگامـــهٔ ما
گویند که روزِ حشر شب می نشـــود آنجا بگشـــایند مگر نامـــهٔ ما

وله — ۵

تا چنـــد کشم غصـــهٔ هر ناکس را وز خستِ خود خاک شـــوم هر خس را
کارم بدعا چو بر نمی آیـــد راست دادم سـه طلاق این فلکِ اطلس را

وله — ۶

هرگه که بینی دو سه سرگـــردان را عیبِ ره مردان نتـــوان کـــرد آنرا
تقلیـــدِ دو سه مقلّـــدِ بیمعنـــی بدنـــام کند رهِ جـــوان مردانـــرا

ولہ — ۷

در کعبہ اگر دل سوی غیر است ترا طاعت ہمہ فسق و کعبہ دیر است ترا
ور دل بخدا و ساکنِ بذکدۂ خوش باش کہ عاقبت بخیر است ترا

ولہ — ۸

وصلِ تو کجا و منِ مہجور کجا دُردانہ کجا حوصلۂ مور کجا
ہر چند ز سوختن ندارم باکے پروانہ کجا و آتشِ طور کجا

ولہ — ۹

دور از تو فضای دہر بر من تنگست دارم دلکی کہ زیر صد من سنگست
عمریست کہ مدّتش زمانرا عار ست جانیست کہ بردنش اجل را ننگست

ولہ — ۱۰

گر سبحۂ صد دانہ شماری خوبست ور جامِ می از کف نگذاری خوبست
گفتے چہ کنم چہ تحفہ آرم برِ دوست بے دردِ میا ہرانچہ آری خوبست

ولہ — ۱۱

گہ میگردم بر آتشِ ہجر کباب گہ سرگردانِ بحرِ غم ہمچو حُباب
القصّہ چو خار و خس درین دیرِ خراب گہ بر سر آتشم گہے بر سرِ آب

ولہ — ۱۲

کارم ہمہ نالہ و خروشست امشب نے صبر پدید است و نہ ہوشست امشب
دوشم خوش بود ساعتے پنداری کفّارۂ خوش دلیٔ دوشست امشب

ولہ — ۱۳

ای آئینۂ حسنِ تو در صورت زیب گردابِ ہزار کشتیٔ صبر و شکیب
ہر آئینۂ کہ غیرِ حسنِ تو بود خواند خردش سرابِ صحرای فریب

ولہ — ۱۴

آلودهٔ دنیا جگر ریش تَر است　　آسودهٔ تر است، هرکه درویش تَر است
هر خر که برو رنگی و زنجیری هست　　چون بر نگری بار برو بیشتر است

ولہ — ۱۵

دیشب که دلم ز تابِ هجران می سوخت　　اشکم همه در دیدهٔ گریان میسوخت
میسوختم آنچنان که غیر از دل تو　　بر من دلِ کافر و مسلمان میسوخت

ولہ — ۱۶

سیمای شد هوا و زنگاری دشت　　ای دوست بیا و بگذر از هرچه گذشت
گر میلِ وفاداری اینک دل و جان　　ور میلِ جفا داری اینک سر و طشت

ولہ — ۱۷

عقرب سرِ زلفِ یار و مه چنبرِ اوست　　شیرین سخنی که شهد در شکّر اوست
با اینهمه کبر و ناز کاندر سرِ اوست　　فرمان دهِ روزگار فرمان برِ اوست

ولہ — ۱۸

ای دل چو خدنگت رگِ جان بگشودت　　منمای بکس چهرهٔ خون آلودت
می نال چنانکه نشنود آوازت　　میسوز چنانکه بر نیاید دودت

ولہ — ۱۹

سرِّ سخنِ دوست نمی یارم گفت　　دُرّیست گرانبها نمی یارم سُفت
ترسم که بخواب در بگویم بکسے　　شبهاست کزین حذر نمی یارم خفت

ولہ — ۲۰

در بحرِ یقین که دُرِ تحقیق بسے است　　گرداب درو چو دام کشی نفسی است
هر گوشِ صدف حلقهٔ چشمست پر آب　　هر موج اشارهٔ ز ابروی کسی است

ولہ — ۲۱

شب آمد و رفتم اندر غمِ دوست هم بر سرِ گریه چشمم را خوست
از خون دلم هر مژهٔ پنداري لختیست که پارهٔ جگر بر سرِ اوست

ولہ — ۲۲

گفتي که فلان زیادِ ما خاموشست از بادهٔ عشقِ دیگرے مدهوشست
شرمت بادا هنوز خاکِ درِ تو از گرمیِ خونِ دلِ من در جوشست

ولہ — ۲۳

آنشب که مرا بوصلِ آنمه رنگست بالای شبم کوته و پهنا تنگست
وان شب که ترا بر منِ مسکین جنگست شب‌کور و خروس گنگ و پروین لنگست

ولہ — ۲۴

اندر همه دشت خاوران گر خاریست آغشته بخونِ عاشق افگاریست
هرجا که پریرخی و گلرخساریست مارا همه در خوراست مشکل کاریست

ولہ — ۲۵

سرتا سر دشتِ خاوران سنگي نیست کز خونِ دل و دیده برو رنگے نیست
در هیچ زمین و هیچ فرسنگے نیست کز دست غمش نشسته دلتنگي نیست

ولہ — ۲۶

ای دل غم‌عشق از برای من و تست سر بر خطِ او نه که سزای من و تست
تو چاشنیِ درد ندانی ورنه یکدم غمِ دوست خوبیهای من و تست

ولہ — ۲۷

ناکامیم ای دوست ز خود کامیِ تست وین سوختگیهای من از خامیِ تست
مگذار که در عشقِ تو رسوا گردم رسوائي من باعثِ بدنامیِ تست

وله — ۲۸

بر من در وصل بسته میدارد دوست دل را بفراق خسته میدارد دوست
من بعد منِ و شکستگي و درِ دوست چون دوست دلِ شکسته میدارد دوست

وله — ۲۹

عشقم که بهر رگم غمی پیوند است دردم که دلم بدرد حاجتمند است
صبرم که بکام و پنجهٔ شیرم هست شکرم که مدام خرّم و خورسند است

وله — ۳۰

ما کشتهٔ عشقیم و جهان مصلحِ ما است ما بیخور و خوابیم و جهان مطبخِ ما است
مارا نبود هوای فردوس ازانکه آن جنّهٔ آتشین او دوزخِ ما است

وله — ۳۱

دل چیست که گویم از برای غمِ تست یا آنکه حریمِ من سرای غمِ تست
لطفیست که میکند غمت با دلِ من ورنه دلِ تنگِ من چه جای غمِ تست

وله — ۳۲

از کفرِ سرِ زلفِ وی ایمان میریخت وز گوش ولبش چشمهٔ حیوان می ریخت
چون کبکِ خرامنده بصد رعنائي میرفت و ز سر تا قدمش جان میریخت

وله — ۳۳

راهیست ز کعبه تا بمقصد پیوست از جانب میخانه رهِ دیگر هست
امّا رهِ میخانه ز آبادانی راهیست که کاسهٔ میرود دست بدست

وله — ۳۴

عاشق نتواند نفسي بیغم زیست بے یار و دیار اگر بود خود غم نیست
خوش انکه بیک کرشمه جان کرد نثار هجران و وصال را ندانست که چیست

وله — ۳۵

آنی که ز جانـــم آرزوی تو نرفت از دل هوسِ روی نکوی تو نرفت
ازکوی تو هر که رفت دل را بگذاشت کس بادلِ خویشتن ز کوی تو نرفت

وله — ۳۶

غازی که پی شهادت اندر تگ و پوست غافل که شهیدِ عشق فاضلتر ازو ست
فردای قیامت او بدین کی ماندـــد آن کشتهٔ دشمن است و این کشتهٔ دوست

وله — ۳۷

یار آمد و گفت خسته میدار دلت دایـــم بامیـــد بسته میدار دلت
مـــارا بشکستگان نظرهـــا باشـــد مارا خـــواهی شکسته میدار دلت

وله — ۳۸

ما دل ز غمت شکسته داریم ای دوست از غیرِ تو دیده بسته داریم ای دوست
گفتی که بـــدلِ شکستگان نزدیکم ما نیز دلِ شکسته داریم ای دوست

وله — ۳۹

راهِ تو بهر روش که پویند خوشست کوی تو بهر جهت که جویند خوشست
روی تو بهر دیده که بینند نکـــوست ذکرِ تو بهر صفت که گویند خوشست

وله — ۴۰

عشق آمد و خاک محنتم برسر ریخت زان برقِ بلا بخرمنم اگر ریخت
خون در دل و ریشهٔ تنم سوخت چنان کز دیده بجای اشک خاکستر ریخت

وله — ۴۱

ایدوست ایدوست ایدوست ایدوست جورِ تو ازان کشم که روی تو نکوست
مردم گویند بهشت خواهی یا دوست ای بیخبران بهشت با دوست نکوست

ولهٔ — ۴۲

پرسید زمن کسی که جانانِ تو کیست گفتم که فلان کسست مقصودِ تو چیست
بنشست بهای های بر من بگریست کزدستِ چنین کسی چسان خواهی زیست

ولهٔ — ۴۳

عصیانِ خلایق ارچه صحرا ست در پیشِ عنایتِ تو یک برگِ گیاست
هرچند گناهِ ماست کشتی کشتی غم نیست که رحمتِ تو دریا دریاست

ولهٔ — ۴۴

چون حاصلِ عمر تو فریبی ورمی است زو داد مکن گرت بهر دم ستمی است
مغرور مشو بخود که اصلِ من و تو گردی و شراری و نسیمی و نمی است

ولهٔ — ۴۵

از گل طبقی نهاده کین روی منست وز مشک خطی کشیده کین موی منست
صد نافه بباد داده کین بوی منست آتش بجهان در زده کین خوی منست

ولهٔ — ۴۶

دایم نه لوای عشرت افراشتنی است پیوسته نه تخمِ خرّمی کاشتنی است
این داشتنیها همه بگذاشتنی است جز روزهٔ روی که نگه داشتنی است

ولهٔ — ۴۷

از بارِ گنه شده تنِ مسکینم پست یارب چه شود اگر مرا گیری دست
گر در عملم انچه ترا شاید نیست اندر کرمت انچه مرا باید هست

ولهٔ — ۴۸

ایزد که جهان بقبضهٔ قدرتِ اوست دادست ترا دو چیزکان هردو نکوست
هم سیرتِ آنکه دوست داریِ همه‌کس هم صورتِ آنکه کس ترا دارد دوست

وله — ۴۹

شیرین دهنی که از لبش جان میریخت　　کفرش ز سرِ زلفِ پریشان میریخت
گر شیخ بکفرِ زلفِ او ره میبرد　　خاکِ ره تربت بر سرِ ایمان میریخت

وله — ۵۰

هرچند متاعت همه عصیان و خطاست　　وین جسم شکسته کشتیِ موجِ فناست
ای خسته از کثرتِ طوفانِ گناه　　مندیش که ناخدای این بحر خداست

وله — ۵۱

آن آتش سوزنده که عشقش لقبست　　در پیکرِ کفر و دین چو سوزنده نبست
ایمان ذکر و کیشِ محبّت دگر است　　پیغمبرِ عشق نه عجم نه عرب است

وله — ۵۲

درعالم اگر ملک اگر ماه و خور است　　از بادهٔ مستیِ تو پیمانه خور است
فارغ ز جهانی و جهان غیرِ تو نیست　　بیرون ز مکانی و مکان از تو پر است

وله — ۵۳

نردیست جهان که بردنش باختن است　　نرّادیِ او زنقش کم ساختن است
دنیا بمثالِ کعبتین نردیست　　برداشتنش برای انداختن است

وله — ۵۴

عالم بخروشِ لَآ اِلٰـهَ اِلّا هُوْست　　غافل بگمان که دشمن است این یادوست
دریا بوجود خویش موجی دارد　　حس پندارد که این کشاکش با اوست

وله — ۵۵

دردا که درین سوز و گدازم کس نیست　　همراه درین راهِ درازم کس نیست
در قعرِ دلم جواهرِ راز بسی است　　امّا چه کنم محرمِ رازم کس نیست

ولهٔ — ٥٢

هان تا تو نه بندي بمراعاتش پُشت　　کو با گُلِ نـــرم پـــرورد خارِ درشت
هان تا نشوی غـــرّه بدریای کـــرم　　کو بر لب بحر تشنـــهٔ بسیار بکشت

ولهٔ — ٥٧

دی گیسوی عنبر بنِ عنبـــر سایت　　از طرف بنـــاگوشِ سمن سیمایت
افتاده بپـــای تو بـــزاري میگفت　　ســـر تا پایـــم فدای سر تا پایت

ولهٔ — ٥٨

ای خالقِ خلق رهنمائی بفـــرست　　وی رازقِ رزق در گشـــائی بفرست
کارِ منِ بیچاره گره در گـــره است　　رحمے بکن و گـــره گشائی بفرست

ولهٔ — ٥٩

دنیا بجوی وفا نـــدارد ای دوست　　هر لحظه هزار مغز سر گشتهٔ اوست
میدان که خدای دشمنش مي دارد　　گر دشمنِ حق نئي چرا داري دوست

ولهٔ — ٦٠

گردون کمری ز عمرِ فرسودهٔ ماست　　دریا اثری ز اشکِ آلودهٔ ما است
دوزخ شررے ز رنجِ بیهودهٔ ماست　　فردوس دمے ز وقتِ آلودهٔ ماست

ولهٔ — ٦١

از کار کسے قـــرار مي بایـــد هست　　و ین یار که در کنار مي باید هست
هجرے که بهیچ کار مي ناید هست　　وصلے که چو جان بکار مي باید هست

ولهٔ — ٦٢

کبریست درین وهم که پنهاني نیست　　برداشتنِ ســـرم بآســـاني نیست
ایمانش هـــزار دفعه تلقین کـــردم　　این کافر را سر مسلمـــاني نیست

ولہ — ۶۳

آن روز کہ آتشِ محبّت افـــروخت　　عاشق روشِ عشق زمعشوق آموخت
از جانبِ دوست سوزد این سوز و گداز　　تا در نگـــرفت شمع پروانہ نسوخت

ولہ — ۶۴

مي رفتم و خونِ دل براهم میریخت　　دوزخ دوزخ شرر ز آهم میریخت
من آمدم از شوق بر گلشن کـــون　　دامن دامن گل از کنارم میریخت

ولہ — ۶۵

یارب سببِ حیـــوۃ حیوان بفرست　　وز خوانِ کرم نعمتِ الوان بفرست
از بهرِ لبِ تشنـــۂ طفـــلانِ نبات　　از دایـــۂ ابر شیـــرِ باران بفرست

ولہ — ۶۶

ای بادِ صبا دلم چو بوی تو گرفت　　بگذاشت مرا و جستجوی تو گرفت
اکنـــون زمنش هیچ نمي آید یـــاد　　بوی تو گرفتـــہ بود خوی تو گرفت

ولہ — ۶۷

هرچند آدمي مَلَک سیرت و خوست　　بدگـــر نبود بدشمنِ خود نیکوست
دیوانۂ دل نیست کین عادت اوست　　کو دشمنِ جانِ خویش مي دارد دوست

ولہ — ۶۸

دل طفلکِ خاک بیز غربال بدست　　میزد بدو دست و روی خودرا میخست
مي گفت بهای های افسوس و دریغ　　ریگے به نیافتیم و غربال شکست

ولہ — ۶۹

اندر همہ دشتِ خاوران سنگے نیست　　کش با من و روزگارِ من جنگے نیست
با لطف و نـــوازشِ وصال تو مرا　　در دادنِ صد هزار جان ننگے نیست

ولہ — ۷۰

چشمے دارم همه پر از دیدنِ دوست بادیده مرا خوش است تا دیده دروست
از دیده و دوست فرق نتوان کردن یا اوست بجای دیده یادیده خود اوست

ولہ — ۷۱

رخسارهٔ من تـــازه گل گلشن روح نازک بود آنقدر که هر شام و صبوح
نزدیک بدیـــده گر خیالش لرزد از سایهٔ خار دیـــده گردد مجروح

ولہ — ۷۲

صوفي بسماع سـر ازان افشانـــد تا آتشِ خـــویشتن دمي بنشانـــد
عاقل دانـــد که دایه گهوارهٔ طفل از بهـــرِ سکـــونِ طفل مي جنباند

ولہ — ۷۳

گفتی که شب آیم ارچـــه بیگاه شود شایـــد که زبانِ خلق کوتاه شـــود
بر خفته کجا نهـــان توانی کردن کز بوی خوشِ تو مرده آگاه شود

ولہ — ۷۴

خواهي که خدا کارِ نکو با تو کنـــد ارواحِ ملایک همه رو بـــا تو کنـــد
یا انچه رضای او دران نیست مکن یا راضي شـــو هر انچه او با تو کند

ولہ — ۷۵

بخشای بر انکه جز تو یارش نبود جز خوردن انـــدوه توکارش نبود
در عشق بالیقین نبـــاشـــد که دمے هم با تو وهم بیتـــو قرارش نبـــود

ولہ — ۷۶

گویند که محتسب گمانے نبـــرد این پـــردهٔ تو پیش جهانے نـــدرد
گویم که ازین شراب اگر محتسب است دریابد و قطرهٔ بجـــامی بخـــرد

وله ـــ ۷۷

شب خیز که عاشقان بشب راز کنند　　گـــرد سرِ کوی دوست پرواز کنند
هر جا که درے بود بشب بر بندند　　الّا درِ عاشقـــان که شب باز کنند

وله ـــ ۷۸

از شبنمِ عشق خاکِ آدم گِل شد　　شورے برخاست قدِ او حاصل شد
سرِ نشتَـــرِ عشق بَرگِ روح رسید　　یکقطرۂ خون چکید و نامش دل شد

وله ـــ ۷۹

در عشقِ تو گاه بت‌پرستـــم گویند　　گه رنـــد و خراباتي و مستم گویند
اینها همه از بهـــرِ شکستم گویند　　من شاد بآنکه هرچه هستم گویند

وله ـــ ۸۰

نے دیده بود که جستجویش نکند　　نے کام و زبان که گفتگویش نکند
هـــر دل که درو بوئے وفائے نبـــود　　گرپیشِ سگ افگنـــد بویش نکند

وله ـــ ۸۱

آسان گُل باغِ مـــدّعا نتوان چیـــد　　بی سرزنشِ خار وفا نتوان چیـــد
بشگفته گَلِ مـــراد بر شاخِ امید　　تا سر ننهي بزیرِ پا نتوان چیـــد

وله ـــ ۸۲

آن روز که نـــور بر ثـــریّا بستند　　وین منطقـــه برمیانِ جوزا بستند
درکتمِ عدم بسانِ آتش بِ شمع　　عشقت بهـــزار رشته برمـــا بستند

وله ـــ ۸۳

در دوزخم ار زلفِ تو در چنگ آید　　از حـــالِ بهشتیان مـــرا ننگ آید
گر بیتو بصحـــرای بهشتم خوانند　　صحرای بهشت در دلم تنگ آیـــد

ولہ — ۸۴

گر غـــرّہ بعمری بہ تبی برخیزد وین روز جوانی بشبی برخـــیزد
بیـــداد مکـــن کہ مردم ازاریٔ تو در زیـــر لبـــے بیَـــارَبٌّ برخیـــزد

ولہ — ۸۵

در مدرسہ اسبابِ عمل می بخشند در میکـــدہ لذّتِ ازل می بخشند
آنجـــا کہ بنـــاءِ خانۂ رندانست سرمایـــۂ ایمان بُسبُل می بخشند

ولہ — ۸۶

هوشم نہ موافقان و خویشان بردند این کجکلهان موی پریشان بردند
گویـــند چرا تو دل بـــدیشان دادی واللّٰہ کہ من نَـــدادم ایشـــان بردند

ولہ — ۸۷

عاشق همہ دم فکرِ غمِ دوست کند معشـــوق کرشمۂ کہ نیکوست کنـــد
ما جرم و گنہ کنیم و او لطف و کرم هرکس چیزے کہ لایق اوست کند

ولہ — ۸۸

از لطفِ تو هیچ بنـــدہ نومیـــد نشـــد مقبـــولِ تو جز مُقبلِ جاویـــد نشد
مهـــرت بکـــدام ذرّہ پیوست دمے کان ذرّہ بہ از هزارَ خورشید نشد

ولہ — ۸۹

ای عشق بدردِ تو سری می باید صیدِ تو زمن قوی تری می باید
من مرغ بیک شعلہ کبابم بگذار کینَ آتش را سمندرے می باید

ولہ — ۹۰

شـــادم بدلے کز آرزویت گـــذرد خوش دل بحدیثے کہ ز رویت گذرد
نازم بدو چشمے کہ بسویت گذرہ بوســـم کفِ پائے کہ بکـــویت گذرد

ولہ — ۹۱

مارا نبـــود دلـے کہ خورّم گـــردد خود بر سرِ کوے ما طرب کم گردد
گـــر شادئ عالمے بما روی دہـــد بادِ دل ما بـــرو وزد غـــم گردد

ولہ — ۹۲

در چنگِ غم تو دل سرودے نکند پیشِ تو فغان و نالہ سودے نکند
نالیـــم بنالـــۂ کہ آگہ نشـــوی سوزیـــم بآتشے کہ دودے نکند

ولہ — ۹۳

قدّت قدِ من زبارِ محبّت خم کرد چشمت چشمم ز چشمہا پر نم کرد
خالت عالم چو روزِ من تیرہ نمود زلفت کارم چو کارِ خود درہـــم کرد

ولہ — ۹۴

من بیتـــو دمی قرار نتـــوانم کرد احسانِ تـــرا شمـــار نتـــوانم کرد
گر بر تنِ من زبان شود ہر موئے یک شکـــرِ تو از ہزار نتـــوانم کرد

ولہ — ۹۵

از دفترِ عشق ہر کہ فردے دارد اشکِ گلگـــون و چہرۂ زردے دارد
بر گردِ سرے شود کہ سوزیست درو قـــربانِ دلے رود کہ دردے دارد

ولہ — ۹۶

بـــا علم اگر عمل برابر گـــردد کامِ دو جہـــان ترا میسّـــر گردد
مغرور مشو بخود کہ خواندی ورقے زان روز حذر کن کہ ورق بر گردد

ولہ — ۹۷

مـــردانِ تو دل بمہر گردون ننہند لب بر لبِ این کاسۂ پُر خون ننہند
در دایـــرۂ اہلِ وفا چون پـــرگار گر ســـر بنہـــد پای بیرون ننہند

وله — ۹۸

گه زاهدِ تسبیح بدستم خوانده گه رند و خراباتي و مستم خوانند
ای وای بروزگار مستوریِ من گر زانکه مرا چنانکه هستم خوانند

وله — ۹۹

ز آوّل رهِ عشق تو مرا سهل نمود پنداشت رسد بمنزلِ وصلِ تو زود
گامی دو سه رفت و راه را دریا دید چون پای درون نهاد موجش بربود

وله — ۱۰۰

گر پنهان کرد عیب و گر پیدا کرد منّت دارم ازو که بس بر جا کرد
تاجِ سرِ من خاکِ کفِ پای کسیست کو چشمِ مرا بعیبِ من بینا کرد

وله — ۱۰۱

کامل ز یکی هنر ده و صد بیند ناقص همه جا معایبِ خود بیند
خلق ائینهٔ چشم و دلِ یکدیگرند در آئینه نیک نیک و بد بد بیند

وله — ۱۰۲

گلزارِ وفا ز خارِ من می روید اخلاص ز رهگذارِ من می روید
در فکرِ تو دوش سر بزانو بودم امروز گل از کنارِ من می روید

وله — ۱۰۳

خرّم دل آنکه از ستم آه نکرد کس راز درونِ خویش آگاه نکرد
چون شمع ز نور دل سراپا بگداخت وز دامن شعله دست کوتاه نکرد

وله — ۱۰۴

تا ولولهٔ عشقِ تو در گوشم شد عقل و خرد و هوش فراموشم شد
تا یک ورق از عشق تو از بر کردم سیصد ورق از علم فراموشم شد

ولہ — ۱۰۵

گوشم چو حدیثِ دردِ چشمِ تو شنید　　فی‌الحال دلم خون شد و از دیدہ چکید
چشم تو نکو شود بمن چون نگری　　تا کور شود هر آنکه نتواند دید

ولہ — ۱۰۶

یک نیم رخت اَلَسْتَ مِنْکُمْ ببعید　　یک نیم دگر اِنَّ عَذَابِیْ لَشَدِیْد
بر گردِ رخت نوشتہ یُحْیِی و یُمِیْت　　مَن تَابَ مِنَ العِشْقِ فَقَدْ مَاتَ شَهِیْد

ولہ — ۱۰۷

دردا که همي روی بره باید کرد　　وین مفرشِ عاشقي دوتہ باید کرد
بر طاعت و خیرِ خود نباید نگریست　　بر رحمت و فضلِ او نگہ باید کرد

ولہ — ۱۰۸

بدہ مرا تو خدایا درین خجسته سفر　　هزار نصرت و شادي هزار فتح و ظفر
بحرمتِ سہ محمّد بحقِ چار علي　　بدو حسن و حسین و بموسي و جعفر

ولہ — ۱۰۹

یا رب در دل بغیرِ خود جا مگذار　　در دیدۂ من گردِ تمنّا مگذار
گفتم گفتم زمن نمي آید کار　　رحمي رحمي مرا بمن وامگذار

ولہ — ۱۱۰

تا چند حدیث قامت و زلفِ نگار　　تاکی باشي طالبِ بوس وکنار
گر زانکہ نئي دروغ زن عاشق وار　　در عشقِ چو او هزار چون او بگذار

ولہ — ۱۱۱

آگاہ بزي ایدل و آگاہ بمیر　　چون طالبِ منزلي تو در راہ بمیر
عشقست بسانِ زندگاني ورنہ　　زینسان کہ توئي خواہ بزي خواہ بمیر

ولہ — ۱۱۲

مجنون و پریشانِ تو ام دستم گیر — سرگشته و حیرانِ تو ام دستم گیر
هر بے سر و پا چو دستگیرے دارد — من بے سروسامانِ تو ام دستم گیر

ولہ — ۱۱۳

تا روي ترا بدیدم ای شمع طراز — نه کار کنم نه روزه دارم نه نماز
چون با تو بوم نیازِ من جمله نماز — چون بے تو بوم نمازِ من جمله مجاز

ولہ — ۱۱۴

من بودم ودوش آن بتِ بنده نواز — از من همه لابه بود از او همه ناز
شب رفت وحدیثِ ما بپایان نرسید — شب را چه گنه حدیثِ ما بود دراز

ولہ — ۱۱۵

در هر سحرے با تو همیگویم راز — بر درگهِ تو همي کنم عرضِ نیاز
بے منّتِ بندگانت ای بنده نواز — کارِ من بیچاره سرگشته بساز

ولہ — ۱۱۶

جهدے بکن ار پند پذیري دو سه روز — تا پیشتر از مرگ بمیري دو سه روز
دنیا زنِ پیریست چه باشد از تو — با پیره زنے آنس نگیري دو سه روز

ولہ — ۱۱۷

در دل دردیست از تو پنهان که مپرس — تنگ آمده چندان دلم از جان که مپرس
با اینهمه حال در چنین تنگ دلي — جا کرده محبّت تو چندان که مپرس

ولہ — ۱۱۸

ای آئینهٔ ذاتِ تو ذاتِ همه کس — مرآتِ صفاتِ تو صفاتِ همه کس
ضامن شدم از بهرِ نجاتِ همه کس — بر من بنویس سیّئاتِ همه کس

وله — ۱۱۹

الّا ه بفریادِ منِ بیکس رس لطف و کرمت یارِ منِ بیکس بس
هر کس بکسے و حضوتے مي نازد جز حضرتِ تو ندارد این بیکس کس

وله — ۱۲۰

دارم گنهان زقطرهٔ باران بیش وز شرمِ گنه فگنده ام سر در پیش
آواز آمد که شاد باش ای درویش تو در خورِ خود کني وما در خورِ خویش

وله — ۱۲۱

سودای تو ام در جنون میزد دوش دریای دودیده موجِ خون میزد دوش
در نیم شبے خیلِ خیالِ تو رسید ورنه جانم خیمه برون مي زد دوش

وله — ۱۲۲

آتش بدو دستِ خویش در خرمنِ خویش من خود زده ام چه نالم از دشمنِ خویش
کس دشمنِ منِ نیست منم دشمنِ خویش ای ولی من و دستِ من و دامنِ خویش

وله — ۱۲۳

گر قربِ خدا مي طلبي خوشخو باش واندر برِ جمله خلق نیکو باش
خواهي که چو صبح صادق القول شوي خورشید صفت با همه کس یکرو باش

وله — ۱۲۴

تا شیر بُدم شکارِ من بود پلنگ پیروز شدم بهرچه کردم آهنگ
تا عشقِ ترا ببر در آوردم تنگ از بیشه برون کرد مرا روبهٔ لنگ

وله — ۱۲۵

(?) شیدای ترا روحِ مقدّس منزل سودای ترا عقلِ مجرّد مجمل
میّاحِ جهانِ معرفت یعنے دل در بحرِ غمت دست بسر پای بگل

وله — ۱۲۶

پرسید یکے منزلِ آن مهرگسل گفتم که دلِ منست اورا منزل
گفتا که دلت کجاست گفتم برِ او پرسید که او کجا ست گفتم در دل

وله — ۱۲۷

از جمله دردهای بیدرمانم وز جمله سوزِ داغ بے تابانم
سوزنده تراست که چون مردمِ چشم در چشم منی و دیدنت نتوانم

وله — ۱۲۸

شمعم که بپرده نهان فرو مي گريم میخندم و هر زمان فرو مي گريم
چون هیچکس از گریهٔ من آگه نیست خوش خوش بمیانِ جان فرو مي گريم

وله — ۱۲۹

تا چند بگردِ سرِ ایمان گردم وقتست که از کرده پشیمان گردم
خاکم زکلیسا و آبم زشراب کافر تر ازانم که مسلمان گردم

وله — ۱۳۰

ما با می و مستي سرِ تقوی داریم دنیا طلبیم میلِ عقبی داریم
کی دنیی و دین هر دو بهم جمع شوند این است که ما نه دین نه دنیی داریم

وله — ۱۳۱

عودم چو نبود چوبِ بید آوردم روئ سیه و موی سفید آوردم
خود فرمودي که نا امیدي کفر است فرمانِ تو بردم وامید آوردم

وله — ۱۳۲

هر چند که دل بوصل شادان کردیم دیدیم که خاطرت پریشان کردیم
خوش باش که ما خوی بهجران کردیم بر خود دشوار و بر تو آسان کردیم

وله — ۱۳۳

یادت کنم ارشاد وگر غمگینم — نامت برم ار خیزم اگر بنشینم
با عشق تو خوکرده‌ام ایدوست چنانک — در هرچه نظر کنم ترا می بینم

وله — ۱۳۴

هرچند گهٔ زعشق بیگانه شویم — با عافیت کنشت و هم خانه شویم
ناگاه پری رخی بمن بر گذرد — برگردم ازان حدیث و دیوانه شویم

وله — ۱۳۵

در مصطبه‌ها دُرد کشان ما باشیم — بدنامی ارا نام ونشان ما باشیم
از بد تراني که تو شان می بینی — چون نیک به بیني بدلشان ما باشیم

وله — ۱۳۶

حک کرد نیست انچه بنگاشته ام — افکند نیست انچه برداشته ام
باطل بوده است انچه پنداشته ام — حاصل که بهرزه عمربگذاشته ام

وله — ۱۳۷

اندر طلب یار چو پروانه شدم — اوّل قدم از وجود بیگانه شدم
او علم نمي شنید لب بر بستم — او عقل نمي خرید دیوانه شدم

وله — ۱۳۸

اندوه تو از دلِ حزین می دزدم — نامت ززبان آن و این میدزدم
می نالم وقفل بر دهان می فگنم — می گریم وخون در آستین میدزدم

وله — ۱۳۹

غم ناکم و از دردِ تو باغم نروم — جز شاد وامیدوار و خرّم نروم
از درگهِ همچو تو کریمی هرگز — غمناک کسی نرفت ومن هم نروم

ولہ — ۱۴۰

ازعشقِ تو ای نگار اندر نارم مي سوزم ومي سازم ودم برنارم
تادست بگردنِ تو اندر نارم آغشته بخون چو دانه اندر نارم

ولہ — ۱۴۱

ببریده زمن نگارِ میخانه گیم بدریده زمن لباس فرزانه گیم
مجنون بنصیحتِ دلم مي آید بنگر بکجا رسیده دیوانگیم

ولہ — ۱۴۲

ما طیّ بساطِ ملک هستي کردیم بے نقصِ خودي خدا پرستي کردیم
بر ما می وعمل نیک مي پیوندند تف بر رخ که زود مستي کردیم

ولہ — ۱۴۳

گر خلق چنانکه من منم دانندم همچون سگ گر زدر بدر رانندم
ور زانکه درون برون نگردانندم مستوجبِ آنم که بسوزانندم

ولہ — ۱۴۴

یا رب زگناهِ زشتِ خود منفعلم وز قولِ بد و فعلِ بدِ خود خجلم
فیضے بدلم زعالمِ غیب رسان تا محو شود خیالِ باطل ز دلم

ولہ — ۱۴۵

هرگز نبود شکستِ کس مقصودم آزرده نشد ز من دلے تا بودم
صد شکر که چشمِ عیب بینم کور است شادم که حسود نیستم محسودم

ولہ — ۱۴۶

از بیمِ رقیب طوفِ کویت نکنم وز طعنهٔ خلق گفتگویت نکنم
لب بندم واز پای نشینم امّا این نتوانم که آرزویت نکنم

وله — ۱۴۷

من از تو جـــدا نبوده ام تا بـــودم اینست نشـــانِ طالـــعِ مسعـــودم
در ذاتِ تو ناپدیدم ار معـــدومـــم از نورِ تـــو ظاهـــرم اگر موجـــودم

وله — ۱۴۸

هم در رهِ معـــرفت بسی تاختـــه ام هم در صفِ عالمان سر افراختـــه‌ام
چون پرده ز پیشِ خویش برداشته‌ام بشناختـــه‌ام که هیچ نشاختـــه‌ام

وله — ۱۴۹

چون دایرهٔ ما ز پوست پوشانِ تو ایم در سلسله حلقه بگوشان تـــو ایـــم
گر بنوازي ز جان خروشانِ تو ایـــم ور ننوازي هم از خموشانِ تو ایـــم

وله — ۱۵۰

هر چند بصـــورت از تو دور افتـــادم زنهار مبرظـــن که شـــدي از یادم
در کوی وفایِ تو اگر خـــاک شـــوم زانجا نتـــواند کـــه رباید یادم

وله — ۱۵۱

یک جو زِ ایّام نداریـــم و خوشیـــم گر چاشت بود شام نداریم و خوشیم
چون پخته بما مي رسد از عالمِ غیب از کس طمعِ خـــام نداریم و خوشیم

وله — ۱۵۲

گر پاره کنـــي مرا ز ســـر تا بقـــدم موجود شدم ز عشقِ تو مـــن ز عدم
جانے دارم ز عـــشق تو کرده رقـــم خواهیش بشادي کُش و خواهیش بغم

وله — ۱۵۳

بے روی تو رایے استقامت نکنـــم کس را بهـــوای تو ملامت نکنـــم
در جستنِ وصـــلِ تو اقامت نکنـــم از عشـــقِ تو توبه تا قیامت نکنـــم

ولہ — ۱۵۴

عاجز بہ غم عشق تو در نفرازیم — تا سرداریم در غمت در بازیم
گر تو سرِ ما بے سر و سامان داری — مائیم و سرے در قدمت اندازیم

ولہ — ۱۵۵

در کوی تو سر در سر خنجر بنہیم — چون مہرۂ جان عشقِ تو بر در بنہیم
تا مردم اگر عشقِ تو از دل بکنیم — سودای تو کافرم گر از سر بنہیم

ولہ — ۱۵۶

من لائق عشق و درد عشق تو نیم — زنہار کہ ہم نبود عشقِ تو نیم
چون آتشِ عشقِ تو بر آرد شعلہ — من دانم و من کہ مردِ عشقِ تو نیم

ولہ — ۱۵۷

عشقِ تو ز خاص و عام پنہان چکنم — دردے کہ ز حد گذشت درمان چکنم
خواہم کہ دلم بدیگرے میل کند — من خواہم و دل نخواہد این را چہ کنم

ولہ — ۱۵۸

ما در رہ سودائے تو منزل کردیم — سوزیست مرا کہ آتش تہ (?) دل کردیم
در شہر مرا میانِ جسم (?) میخوانند — نیکونامی ز عشق حاصل کردیم

ولہ — ۱۵۹

جہدے بکنم کہ دل ز جان برگیرم — راہ سر کویت و بستان گیرم
چون پردہ میانِ دل و دلدار منم — برخیزم و خود را ز میان برگیرم

ولہ — ۱۶۰

سرمایۂ غم ز دست آسان ندہم — دل بر نکنم از دوست کہ تا جان ندہم
از دوست کہ یادگارِ دردے دارم — آن درد بصد ہزار درمان ندہم

وله — ۱۶۱

ای زلف مسلسلت بلای دل مـــن وی لعل لبت گره گشـــای دل من
مـــن دل ندهـــم بلے وَرایَ دلِ تو تـــو دلَ ندهي اگـــر ورایَ دلِ من

وله — ۱۶۲

بر گوش دلـــم ز غیب آواز رســـان مرغِ دل خسته را بپـــرواز رســـان
یا رب کهَ بدوستیِ مـــردانِ رهـــت این گم شدهٔ مرا بمـــن باز رســـان

وله — ۱۶۳

ای خالقِ ذوالجلال وحقّ رحمـــن ســـازندهٔ کارهـــای بے ســـامان
خصمانِ مرا مطیعِ من میگـــردان بے رحمان را رحیمِ مـــن میگردان

وله — ۱۶۴

ای چشم من از دیدنِ رویت روشن از دیدنِ رویت شده خـــرّم دلِ من
رویت شدّه گل خرّم وَخندان گشته روشن مهِ من گشته ز رویت دلِ من

وله — ۱۶۵

در راهِ یگانگي نه کفر است ونه دین یک گام ز خود برون نه و راه ببیـــن
ای جانِ جهان تو راهِ اسلام گـــزین با مارِ سیه نشین و با خـــود منشین

وله — ۱۶۶

شد دیدهٔ بعشق رهنمون دل مـــن تا کرده پر از غصّه درون دل مـــن
زنهـــار دلم اگـــر نمـــاند روزے از دیده طلب کنند خونِ دل مـــن

وله — ۱۶۷

از ساحت دل غبارِ کثـــرت رُفتـــن به زانکه بهرزه دُر وحدت سفتـــن
مغرورِ سخَن مشو کهَ توحیدِ خـــدا واحد دیدن بود نهَ واحـــد گفتـــن

ولہ — ۱۶۸

دارم الم ز درد چندان چندان با گریه توان گفت نه خندان خندان
در گهرم جمله بتاراج برفت و ان در و گهر چه بود دندان دندان

ولہ — ۱۶۹

بختی نه که با دوست در آمیزم من صبری نه که از عشق بپرهیزم من
دستی نه که با قضا در آویزم من پائی نه که از زمانه بگریزم من

ولہ — ۱۷۰

ای آنکه ترا ست عار از دیدنِ من مهرت باشد بجاے جان در تنِ من
آن دست نگار بسته خواهم که گهی با خون هزار کشته در گردنِ من

ولہ — ۱۷۱

یارب نظرے بر منِ سرگردان کن لطفے بمنِ دلشدهٔ حیران کن
با من مکن انچه من سزایِ آنم انچه از کرم و لطفِ تو آید آن کن

ولہ — ۱۷۲

مهلت مرا برسرِ خنجر بودن یا بهرِ مرادِ خویش بے سر بودن
تو آمدهٔ که کافرے را بکشی غازی چو توئی خوشست کافر بودن

ولہ — ۱۷۳

در راهِ خدا حجاب شد یکسوزن رو جمله کارِ خویش را یکسوزن
در ماندهٔ نفسِ خویش گشتی و مرا یکسو غمِ مال ودختر و یکسوزن

ولہ — ۱۷۴

ای غم گذرے بکوے بدنامان کن فکرِ منِ سرگشتهٔ بے سامان کن
زان ساغرِ لبریز که پر می زغمت یکجرعهٔ بکارِ بے سر انجامان کن

و له — ۱۷۵

ای شمع چو ابر گریه وزاري کُـــن وی آهِ جگر سوز سیه داري کُـــن
چون بهرهٔ وصلِ او نـــداري ایـــدل دندان بجگر نه و جگر خاری کـــن

و له — ۱۷۶

خواهي که کسے شوي توهستي کم کُن نا خورده شرابِ وصل مستي کم کُن
با زلفِ بتان دراز دستي کـــم کـــن بت را چه گنه توبت پرستي کم کُن

و له — ۱۷۷

رفتم بطبیب گفتم از دردِ نهـــان گفتا که زغیر دوست بر بند دهـــان
گفتم که غذا گفت که همي خونِ جگر گفتم پرهیز گفت از هـــر دوجهان

و له — ۱۷۸

آن دوست که مستِ عشقِ اودشمنِ جان برباد همي دهد غمش خرمنِ جـــان
من در طلبش در بدر و کوی بکـــوی او در دل و دست کرده در گردنِ جـــان

و له — ۱۷۹

ای عشق تو مایهٔ جنونِ دلِ مـــن حسنِ رخِ تو ریخته خونِ دل مـــن
من دانم و دل که در وصالت چونـــم کس را چه خبر ز اندرونِ دل مـــن

و له — ۱۸۰

بگریختم از عشق تو ای سیمین تن باشد که زغم باز رهم مسکین مـــن
عشق آمد و از نیـــم رهـــم باز آورد مانندهٔ خونیان رسن در گردنِ مـــن

و له — ۱۸۱

عشق آن صفتی نیست که بتوان گفتن وین دُر بسر الماس نشاید سفتـــن
سوداست که میزنم والله که عشـــق بگُزامد وبگُزهم بخواهد رفتـــن

ولہ — ۱۸۲

ای شعلۂ طُور طُور پر نور از تو — وی مست بہ نیم جرعۂ منصور از تو
ہر شئ جہان جہان نشور از تو — من از تو مست از تو و مخمور از تو

ولہ — ۱۸۳

ای کعبہ پرست چیست کینِ من وتو — صاحب نظرند خوردہ بینِ من و تو
گر بر سنجند کفر و دینِ من و تو — دانند نہایتِ یقینِ من وتو

ولہ — ۱۸۴

از دیدۂ سنگ خون چکاند غمِ تو — بیگانہ وآشنا ندانند غمِ تو
دردے خورم و غمت همي نوش کنم — تا انکہ بکس دگر نماند غمِ تو

ولہ — ۱۸۵

ابر از دهقان کہ ژالہ مي روید ازو — دشت از مجنون کہ لالہ میروید ازو
خلد از صوفي و حورِ عین از زاہد — از ما دلکے کہ نالہ مي روید ازو

ولہ — ۱۸۶

جان و دلِ من فدای خاکِ درِ تو — گر فرمائي بدیدہ آیم برِ تو
وصلت گوید کہ تو نداري سرِ ما — بے سر بادا هرآن کہ ندارد سرِ تو

ولہ — ۱۸۷

ای دردِ دلم اصلِ تمنّا همہ تو — وی دردِ سرم مایۂ سودا همہ تو
هر چند بروزگار در مي نگرم — امروز همہ توئي و فردا همہ تو

ولہ — ۱۸۸

ای شمعِ دلم قامتِ سنجیدۂ تو — وصلِ تو حیاتِ این ستمدیدۂ تو
چون آئینہ پر شد دلم از عکسِ رخت — سویت نگرم ولیک از دیدۂ تو

ولہ — ۱۸۹

زلفش بکشي شبِ دراز آید ازو ور بگذاري زچنگل باز آید ازو
ور پیچ وخمش زیکدگر باز کني عالم عالم مشک فراز آید ازو

ولہ — ۱۹۰

ما را نبود دلی که کار آید ازو جز نالۂ که هر دمی هزار آید ازو
چندان گریم که کوچها گِل گردد نے روید ونالههای زار آید ازو

ولہ — ۱۹۱

ما درویشان نشستهٔ در تنگِ درهٔ گه قرصِ جوی خوریم گه پشتِ برهٔ
پیرانِ کهن دانند ومیرانِ سرهٔ هر کس که بما بد نکرد جان نبرهٔ

ولہ — ۱۹۲

از بسکه شکستم وبستم توبه فریاد ممي کند زدستم توبه
دیروز بتوبهٔ شکستم ساغر امروز بساغرے شکستم توبه

ولہ — ۱۹۳

ای رویتو ماهِ عالم آرای همه وصلِ تو شب وروز تمنّای همه
گر بادِگران بهَ ز منی وای بمن ور بَا همه کس همچو منی وای همه

ولہ — ۱۹۴

من کیستم از خویش بتنگ آمدهٔ دیوانهٔ با خود بچنگ آمدهٔ
دوشینه بکوے دوست از رشکم گشت نالیدنِ پای دل بسنگ آمدهٔ

ولہ — ۱۹۵

افسوس که عمر رفت بر بیهوده هم لقمهٔ حرام وهم نفس آلوده
فرمودهٔ نا کرده سیه روام کرد فریاد ز کردههای نا فرموده

ولہ — ۱۹۶

ای نیک نکردہ و بدیہا کردہ — وانگاہ نجات خود تمنّا کردہ
بر عفو مکن تکیہ کہ ہرگز نشود — نا کردہ چو کردہ کردہ چون نا کردہ

ولہ — ۱۹۷

ای در صفتِ ذاتِ تو حیران کہ و مہ — وز ہر دو جہان خدمتِ درگاہِ تو بہ
علّت تو ستانی و شفا ہم تو دہی — یارب تو بفضلِ خویش بستان و بدہ

ولہ — ۱۹۸

جز وصلِ تو دل بہرچہ بستم توبہ — بے یادِ تو ہرجا کہ نشستم توبہ
در حضرتِ تو توبہ شکستم صد بار — زین توبہ کہ صد بار شکستم توبہ

ولہ — ۱۹۹

معمورۂ دل بعلم آراستہ بہ — معمورۂ جان ز کینہ پیراستہ بہ
از ہستیٔ خود ہرچہ توان کاستہ بہ — ہر چیز کہ ز مہرِ تست نا خواستہ بہ

ولہ — ۲۰۰

من کیستم از قیدِ دو عالم فردے — عنقا منشِ بلند ہمت مردے
دیوانۂ خودی بیابان گردے — لبریزِ محبّتے سراپا دردے

ولہ — ۲۰۱

ای آنکہ بملکِ خویش پایندہ توئی — وز دامنِ شب صبح نمایندہ توئی
کار من بیچارہ قوی بستہ شدہ — بگشای خدایا کہ گشایندہ توئی

ولہ — ۲۰۲

جان چیست غم و درد و بلا را صدفے — دل چیست درون سینہ سوزے و تفے
القصّہ پئے شکستِ ما بستہ صفے — مرگ از طرفے وزندگی از طرفے

ولہ — ۲۰۳

ای از تو ببـاغ هر گلے را رنگے هر مـرغی را ز شـوق تو آهنگے
با کوہ ز اندوہِ تـو رمزے گفتـم بر خاست صدایِ نالہ از هر سنگے

ولہ — ۲۰۴

از دردِ تو نیست چشم خالي زنمے هرجا که دلیست شد گـرفتار غمے
بیماریِ تو باعثِ نا بودن ماست ای باعثِ عمـر مـا نباشـد الے

ولہ — ۲۰۵

پیوستـہ تو ادلربودۂ معـذورے غـم هیـچ نیـازمودۂ معذورے
من بیتـو هزار شب بخون در خفتم تو بی من شبـے نبـودۂ معذورے

ولہ — ۲۰۶

از هستیِ خویش تا پشیمان نشوي سر حلقۂ عارفان و مستـان نشوي
تا در نظرِ خلق نگـردي کافـر در مذهبِ عاشقان مسلمان نشوي

ولہ — ۲۰۷

در کویِ تو میدهند جانے بجوے جانے بجوے چـہ کاوانے بجوے
از وصلِ تو یکجو بجهان مي ارزد زین جنس که مائیم جهانے بجوے

ولہ — ۲۰۸

گه شانه کشِ طـرۂ لیـلیٰ باشي گه در سرِ مجنون همـہ سودا باشي
گه آئینۂ جمـالِ یوسف گـردي گـہ آتشِ خرمنِ زلیـخـا باشي

ولہ — ۲۰۹

ای دل برِ دوست تحفه جز جان نبري دردے چو دهند نامِ درمان نبري
بے درد ز دردِ دوست نالان گشتي خاموش که عرض دردمنـدان نبري

ولهٔ — ۲۱۰

ای دیده مرا عاشقِ یارے کردي حیرانِ رخِ لالهٔ عذارے کردي
کارے کردي که هیچ نتوان گفتن للّٰه اللّٰه چه خوب کارے کردي

وله — ۲۱۱

با نگذري از جمع بفردے نرسي تا نگذري از خویش بمردي نرسي
تا در رهِ دوست بے سروپا نشوي بی درد بمعاني و بدردی نرسي

وله — ۲۱۲

گیرم که هزار مصحف ازبر داري با کبر چه مي کني که در سر داري
سر را بزمین چه مي نهي بهرِ سجود آن را بزمین بنه که در سر داري

وله — ۲۱۳

عشقم دادي ز اهلِ دردم کردي از دانش و عقل و هوش فردم کردي
سجّادهٔ نشینِ باوقارے بودم میخوارهٔ و رند و کوچه گردم کردي

وله — ۲۱۴

دل داغِ تو دارد ارنه بفروختمی در دیدهٔ توئي وگرنه مي دوختمی
دل منزلِ تست ورنه روزے صد بار در پیشِ تو چون سپند مي سوختمی

وله — ۲۱۵

ای چرخ بسے لیل و نهار آوردے گه فصلِ خزان و گه بهار آوردے
مردانِ جهان را همه بردي بزمین تا مردان را بروي کار آوردے

وله — ۲۱۶

ای آنکه بکُنهت نرسد ادراکی کونین به پیش رحمتت خاشاکی
از روئ کرم اگر ببخشي مارا بخشیدهٔ از لطف تو مشتی خاکی

ولہ — ۲۱۷

بے پا و سر آن دشتِ خون آشامي مردنـــد ز حسرت و غـــمِ ناکامـي
منحت زدگانِ وادیِ شـــوقِ ترا هجران کُشد و اجل کُشد بدنامي

ولہ — ۲۱۸

دستے نہ کہ از نخل تو چینم ثمرے چشمے نہ کہ بر خویش بگریم قـدرے
پائے نہ کہ در کوے تو یابم گذرے روے نہ کہ بر خاک بمالم سحرے

ولہ — ۲۱۹

ای بر سرِ هرکس از خیـــال تو بسے بے یادِ تـــو بر نیاید از دل نفسے
مفروش مرا مبخش آزاد مکـــن من خواجہ یکے دارم و تو بندہ بسے

ولہ — ۲۲۰

اوّل همـــہ جـــامِ آشنائي دادي اخر بستّم زهرِ جـــدائي دادي
چون کشتہ شدم بگفتي این کشتۂ کیست داد از تـــو کہ دادِ بیوفائي دادي

ولہ — ۲۲۱

ای کاش مـــرا بنفت آلایـــدی آتش بزدندی و نبخشایـــدی
در چشمِ عزیـــزِ من نمک ساییدی وز دوست جدا شدن نفرمایـــدی

ولہ — ۲۲۲

ای دل ز شرابِ جهل مستي تا کے وی نیست شوندہ لافِ هستي تا کے
گر غرقـــۂ بحرِ غفلت و آز نـــۂ تر دامنـــي و هـــوا پرستي تا کے

ولہ — ۲۲۳

ای در خمِ چوگانِ تو دل همچون گوی بیرون نہ ز فرمانِ تو دل همچون گوی
ظاهر کہ بدستِ ماست شستیم تمام باطن کہ بدستِ تست آنرا تو بشوی

و له — ۲۲۴

گرمید عدم شوي ز خود رسته شوي ور در صفتِ خویش روي بسته شوي
میدانَ که وجودِ تو حجابِ رهِ تست با خود منشین که هر زمان خسته شوي

و له — ۲۲۵

ای دل تا ے مصیبت افزا گردي ای خون شده درد پیما گردي
انداختیم در بدر و کوے بکوے رسوا کردي مرا تو رسوا کردي

و له — ۲۲۶

تا بتواني بکش بجان بار دلے مي کوش که تا شود ترا یار دلے
آزارِ دلے مجوے که ناگاه کني کارِ دو جهان در سرِ آزار دلے

و له — ۲۲۷

دنیا راهے بهشت منزل گاهے وین هر دو بنزدِ مردِ معنے کاهے
گر عاشقِ صادقي ز هر دو بگریز تا دوست ترا بخود نماید راهے

و له — ۲۲۸

درمدرسه گرچه دانش اندوز شوي وز گرمیٔ بحث مجلس افروز شوي
در مکتبِ عشق با همه دانائي سرگشته چو طفلانِ نوآموز شوي

P.S.—The manuscript from which these Rubā'īyāt are printed is a bayāz containing various kinds of verses and a few pages of prose. Nearly the entire anthology appears to be in the handwriting of the same copyist. From one part of the bayāz, it would appear that it was written in 1134 H., that is, a little less than two centuries since.

2. Certain Rubā'īs of the text are also to be found among the Quatrains of other poets, either exactly or with some difference.

3. There are a few Quatrains of Abu Sa'īd's that are found in some Biographical works of the Saint which are recited as prayer when a man is ill, or in want of something. Only a few of them are Abu Sa'īd's and are to be traced in the text. I have little doubt that most of this latter class of Quatrains are by some other person than Shaykh Abu Sa'īd ibn Abu'l Khayr.

39. Two Inscriptions of Kumāra Gupta I.

By Rākhāla Dāsa Bandyopādhyāya.

The inscriptions edited here are incised on different materials. The first inscription is incised on stone while the second has been incised on a thin plate of copper.

A. Inscription on a Stone Liṅga, Gupta Saṁvat 117.

The inscription is incised on the octagonal base of a *liṅga*, of greyish sandstone, which was discovered in the village of Bharadi Dih in the Fyzabad district. It is now deposited in the Lucknow Provincial Museum.[1] I came across the inscription while cataloguing the Archæological collections of the Lucknow Museum. A summary of the contents has already been published by Dr. J. Ph. Vogel.[2] A fuller account will be given in the *Epigraphia Indica* by Dr. Sten Konow of Christiania.

The inscription is incised on five faces of the octagonal base of the *liṅga* and consists of eleven lines. The average length of each line is 1′ 6″ or o. m. 48, and the average height of the letters $1\frac{1}{4}$″ or o. m. 04. The inscription refers itself to the reign of the Early Gupta King, Kumāragupta I, and the date, in words, is the year one hundred and seventeen (A. D. 435–36), the tenth day of the month of Kārttika. The object of the inscription is to record the dedication of some object for the worship of the god Mahādeva, known by the name Pṛthivīśvara, at the feet of the god Śaileśvara. *Śaileśvara* is a well-known name of Mahādeva. But the existence of one image at the feet of a similar is unusual. The lower part of the inscription is missing. The name of the donor and his genealogy is of surpassing interest. The donor was a Brāhmaṇa named Pṛthivīṣeṇa, who at first was the minister and *Kumārāmātya* of the Emperor Kumāragupta I, and afterwards became his Commander-in-chief (*Mahābal = ādhikṛta*). His father was the minister of the Emperor Chandra Gupta II. This is of surpassing interest and very important for the dynastic history of the Early Gupta Emperors, as it proves that some at least of the offices under the Gupta-Emperors were hereditary. It is well known that under the later dynasties, such as the Pāla Kings of Bengal and the Gahaḍavala Kings of Kanauj, some of the offices were hereditary. The names Pṛthivīseṇa and his father Śikharasvāmi have not been met with before.

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[1] Annual Report of the Superintendent Archæological Survey, Northern Circle, 1907–8.

[2] Fleet's *Gupta Inscriptions*, p. 100.

The language of the inscription is Sanskrit, and the inscription is in prose, but it is full of mistakes and has been very carelessly incised. Thus we have *Mahārājadhijāja* for *Mahārājādhirāja* in ll. 5-6, and sixth case ending twice after Kumārāmātya in ll. 8-9. *Kumāra* has, invariably, been spelt with the long *ū*, *putra* is spelt twice with the short *u*, and once with the long one. The sign of *avagraha* has been omitted twice, once in l. 4 and again in ll. 7-8. The proper left portions of the first three lines have suffered much, but the portion can be restored easily from cognate inscriptions.

Text.

1. Namo Mahadevāya Mahārājādhirāja Śrī [Candra]gupta [pādā]
2. -nudhyātasya catur = udadhi-salil-āsvādita ya—[śasor = mmahārājā]
3. -dhirāja Śrī Kumāraguptasya vijaya-rājya-saṁvatsara-śata-saptadaśot[tara]
4. Kārttika-māsa-daśama-divase = syan = divasa pūrvvāyān = nandag (?) ācaryy-āśva-vāji
5. -sagottra Kuramaraṅya bhaṭṭasya puttro Viṣṇupālita bhattas = tasya pūtra Mahārā-
6. jādhijāja Śrī-Candraguptasya Mantrī—Kumārāmātyaś = Śikharasvāmy = abhūt = tasya putraḥ
7. Pṛthiviṣeṇo Mahārājādhirāja Śrī Kumāraguptasya Mantrī-Kumārāmātyo = na
8. ntaraṁ ca Mahābalādhikṛtaḥ bhagavato Mahādevasya Pṛthivīśvaraḥ Ity = evaṁ saṁākhyātasya
9. syaiva yathākarttavya dhārmmika karmmaṇā pāda-śuśruṣaṇāya bhagavac = Chai
10. leśvarasvāmi-mahādeva-pada-mūle Āyodhyaka nānā-gottra-caraṇa-trapaḥ (?)
11. svādhā ..... sa-tabheṣa ..... pāragate ..... -devado .... gā.

Translation.

Om ! Adoration to Mahādeva ! On the tenth day of the month of Kārttika in the year 117 of the victorious reign of the illustrious Mahārājādhirāja Kumāragupta, whose fame has been tasted by the water of the four Oceans (and) who meditated on the feet of the illustrious Mahārājādhirāja Candragupta. Kuramaraṅya bhaṭṭa belonged to the Nandag (?) ācāryya aśvavajī gottra. His son (*was*) Viṣṇupālita bhaṭṭa. His son was Śikharasvāmi, the minister and Kumārāmātya to the illustrious Mahārajādhirāja Candragupta. His son Pṛithiviṣeṇa (*was*) the minister and Kumārāmātya and afterwards the Commander-in-chief (*Mahābalādhikrta*) of the illustrious Mahārājādhirāja Kumāragupta. On the above-mentioned day, for the worship,

properly by religious acts, of the feet of the lord Mahādeva, famous as Prithiviśvara.....at the feet of the lord Mahādeva (named) Saileśvara.....(*Brāhmaṇas*) of various *gottras* and caraṇas from Ayodhyā....."

B. Copper-plate Grant of the Gupta year 113.

This inscription is incised on one side of a thin plate of copper measuring $5\frac{1}{4}''$ or o. m. 13 by $5\frac{1}{2}''$ or o. m. 14. It was discovered near Dhanāidaha, police station Baraigrāma, in the Nattore sub-division of the Rajshahi district. The discovery was brought to the notice of Babu Akṣaya Kumara Maitreya, a pleader of Rajshahi, and a member of this Society, who finally obtained from the landlord Maulawi Ershad Ali Khan Chaudhuri of Nattore. Babu Akṣaya Kumar sent the plate to the *Baṅgiya Sāhitya Pārishad* at the request of the Secretary of that body for the Calcutta Industrial Exhibition of 1906-7. The grant was made over to me for decipherment after the exhibition by Babu Byomakeśa Mustauphi, one of the assistant Secretaries of the Pārishad. Dhanāidaha stands on the banks of a small rivulet called the Khalsiādāṅgā, which is a branch of the Barāl.

The grant has been incised on a badly corroded thin sheet of copper and is in a bad state of preservation. A large portion of the upper right corner and the lower left corner is missing. Some fragments of the upper right corner were broken in the exhibition grounds, and some more have crumbled into dust when it was in my possession. Fortunately I took a couple of photographs on receiving the copper-plate, so that the portion can be made out with certainty. The loss of the fragments broken in the exhibition grounds is the more regrettable, as I distinctly remember that the first two letters were *ma* and *ra*, evidently the second and third syllables of the name of the Emperor Kumāragupta. The inscription consists of seventeen fragmentary lines, portions of which are fairly legible. The language is Sanskrit, and with the exception of ll. 14-16, which contain the usual imprecatory verses, the whole of the inscription is in prose. The inscription is dated in the year one hundred and thirteen of the Gupta era, *i.e.*, 431-42 A.D., and refers itself to the reign of the Early Gupta Emperor Kumāragupta I. The bad state of preservation makes it very difficult to make any remarks on the orthography. Thin plates of copper seems to have been in general use for incising land-grants during the reign of the Early Gupta Emperors as both grants of the Rāṇā Hastin are incised on very thin plates of copper like the grants of the Mahārājas of Ucchakalpa.

The copper-plate is of great interest as being the earliest copper-plate grant ever discovered. If we agree with Dr. Fleet in declaring the Gayā grant of Samudragupta to be a forgery, the truth of the above statement at once becomes apparent. The Kharoṣṭhi inscribed plates are not land-grants, and the

Sohgaura plate is unique in nature. Hitherto the earliest known copper-plate grant was the Indorkhera grant of Skanda gupta of the Gupta year 146.[1]

The characters of the grant belong to the period when the eastern variety of the Gupta alphabet was gradually dying out, and its place was being taken by the characters of the western variety. The *ha* and palatal *ṣa* have the same form in all cases and resemble the form of the eastern variety. The only difference is the letter *la* which in one case only has the form as the western variety, *viz.*, *Lena* in l. 8. The proper left vertical lines of *ga*, *ta*, *bha* and *śa* are unusually long, and the right-hand portions of *pa*, *ṣa* and *sa* show acute angles.[2]

The wording of the record is rather difficult to interpret, and the corrosion has tended to make the meaning more obscure. Two Brahmaṇas, Śivaśarmman and Nāgaśarmman, inhabitants of a place called Kṣudraka, are mentioned in l. 3. Two more proper names are to be found in l. 5.—Visyadevaśarmma (*Viśvadevaśarmman*) and Visyabhadra (*Viśvabhadra*). The phrase *Nīvīdharmmakṣayam = ālabhya* in l. 8 is very significant. It shows that the object of this grant was in the possession of either the group mentioned in l. 3 or that in l. 5, and that it was given to Varāhasvāmi, a Sāmavedī Brahmaṇa, after reversing the process known as Nīvī-dharmna, *i.e.*, destroying the permanency of the grant. The other names mentioned in l. 5 are most probably names of countries. *Upaka* may also be read as Rumaka, and may be taken to refer to the Roman Empire. It is very tempting to take the other name to be *Khasaka* and identify it with the country of the *Khasas*, *i.e.*, modern Kumaun and Garhwal, but the *u* mark is too clear to be ignored. The donee was Varāhasvāmin, a chāndaśa (*chāndasa*, e.g., *Sāmvedin*) brahmaṇa, l. 12. The object of the grant was situated in the Mahākhuṣāpāra *viṣaya* (*district*). A local officer (*Kulādhikaraṇa*), who exercised authority over eight villages, is mentioned in l. 6. The discovery of the Basarh seals by the late Dr. Bloch has familiarised us with the names of many of the officials of the Gupta Empire, but this particular one has not been met with as yet. Lines 14–16 contain portions of the usual imprecatory verses. The record was incised by Sthahneśvaradāsa. No continued translation is possible of the text, and I edit it from the original :—

Text.

1. ..... [Śrī-Kumāra-gupta-rājya-sa]mbatsara[3] śata-trayodaśutta[ra][4] .....

2. .....[asyā]n = divasa purvvā-yāṁ parama-daivata para[ma] .....

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[1] *Ibid.*, p. 68. [2] Bühler's Indian Palæography (ed. Fleet), p. 47.
[3] The use of *ba* for *va* is common among North-eastern Inscriptions.
[4] Read *daśottara*.

3. ..-.....Kṣudra[ka nivāsinaḥ] brāhmaṇa Śivaśarmma Nāgaśarmma Maha.....

4. .....[De]vakīrtti-kṣamavanta goṣthaka [1] vargga pāla piṅgala S'u(?)ṅkuka [2] kāla.....

5. .....Vīṣya-deva-śarmma Viṣya-bhadra Khuṣaka Upaka Gopāla [3] .....

6. .....S'ībhadrastham = apaharaṇa (?) bhyā—grāmāṣṭakulādhikaraṇa.....

7. ..Caraṇa-vijñāpita....Mahā Khuṣāpāra viṣaye nivatta [4] maryyādā sthiti.....

8...nīvī-dharmma-kṣayam = ālabhya....darhatham-āśādya nanu vakkra lena (?) vā.....

9. ..pale (?) ty = abhihita Sarvva laṁva....karaprati prati kuṭumbibhir = avasthāpya ka.....

10. ..parityaktena ya vi..ca..dahyakam-iti yatas-t(y)ajati pratipādya.....

11. ..vara nālaka sada (?) vi..chya.....kṛtya vasa-laka (?) datta tataḥ suyuktaka.....

12. ....bhū (?) kaṭakavantebhya (?) chāndaśa (?) brāhmaṇa Varāhasvāmine dattaṁ tadva.....

13. .....bhūmy-ādān = kṣepa (?) ca śuṇu (?) guṇamanucintya śarīra kalyā (?) nakasya co.....

14. śa uktañ-ca bhagavatā Dvaipāyanena Svadattām = paradattām = bā.....

15. ..tṛbhiḥ saha pacyati S'asṭi(ṁ)varṣa sahasrāṇi svargge modati bhūmida[ḥ]....

16. ..pūrvvadattāṁ dvijātibhya [ḥ] yatnād-rakṣa Yudhisṭhira mahī.....

17. .... [o]yam S'rī Bhadrena utkīrṇṇaṁ Sthahneśvara dāse[na] .....

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[1] The *ā* and *u* combines to form *o*.

[2] The word may also be read *Bru (?) ṅkuka*.

[3] *O* as in *gosthaka* in l. 4 : cf. Annual Report of the Archæological Survey of India, 1903-4, p. 102.

[4] Read *nibaddha*.

40. The Bahmanī Dynasty.

By Maulavi 'Abd'ul Walī.

Major Wolseley Haig, I.A., has published some illuminating "Notes on the Bahmanī Dynasty" in this Journal (Part I, Extra No., 1904, pp. 1—15). He has there clearly demonstrated that the cognomen *Bahmanī*, which the founder of the Dynasty had, was not derived from his servitude to a Brahman, but that he assumed the title as he traced his pedigree to King Bahman bin Isfandyār of Īrān. He has also pointed out that the mistake was first committed by Firishta; and those who wrote after him copied from him as a trustworthy guide. Major Haig has quoted from several histories, but there are others, which still remain to be consulted.

It was, therefore, to me a surprise to find in the "Haft-Iqlīm" of Amīn Aḥmad Rāzī, who wrote it in 1002 H., before the time of Firishta, the following passage under *Dakan*:—

طبقهٔ اول ملوک گلبرگه است - و اول ایشان علاء الدین حسن است -
چون صاحب عیون التاریخ نسب ویرا به بهمن بن اسفندیار میرساند هرآئینه آن سلسله به بهمني اشتهار یافته *

"The first Dynasty was that of the Kings of Gulbarga. The founder of it was 'Alau'd-din-Ḥasan. As the author of the 'Uyūnu-t-Tārikh traces his pedigree to Bahman bin Isfandyār, so as a matter of course, the Dynasty became famous under the cognomen *Bahmanī*."

The inference drawn by chroniclers who wrote before the time of Firishta, is quite in accordance with Major Haig's conclusions. Not unfortunately having seen the 'Uyūnu-t-Tārikh I am unable to give any further information on the matter.

The MS. of the Haft-Iqlīm, which belongs to the A.S.B. (D/347) has حسن کاکویه *Ḥasan Ḳākuya* instead of Kanku or Gangu. The word is a puzzle. Is it the Dakanī corruption for *Kaikāūs* کیکاوس the name of the King's father? If this knotty point can be cleared up, the full name and title of the founder of the Bahmanī Dynasty will run somewhat thus:—

علاء الدین حسن بن کیکاؤس بهمنی

'Alau'd-dīn Ḥasan bin[1] Kaikāūs[2] Bahmanī.

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[1] If the word *bin* be dropped, and an *izāfat* put under *n* of Ḥasan (Ḥasan-i) the title will still be correct and more in conformity with that written by chroniclers.

[2] If the letter "s" of Kaikāūs be left out, the word may give rise to the following *variants*, in Persian character—Kaikau. Kankau, Kanku, Gangu, Kaku, etc.

41. Two Inscribed Guns from Assam.

By Rākhāla Dāsa Bandyopādhyāya.

Pencil rubbings of two inscriptions on a couple of guns were sent to me for decipherment by Mr. A. Simson, of 32, Brompton Square, London. In the absence of Dr. Bloch the rubbings were handed over to me. Subsequently, I applied through Dr. N. Annandale for fresh rubbings and photographs if possible. I have recently received a couple of fresh rubbings and a nice photograph through Mr. R. P. Ashton, of Calcutta.

According to Mr. Simson the guns were found in the Diku river in Assam, but he has not mentioned the exact locality where they were found. The accompanying plate has been prepared from a silver print furnished by Mr. Simson. It shows the two guns leaning against a wall. The inscription can be distinctly made out with the help of a magnifying glass. The larger gun is most probably made of brass as it still retains a fine polish even after prolonged submersion in water. There are two different inscriptions on it—

(1) a Persian inscription consisting of two lines; and
(2) a Sanskrit inscription also of two lines in Bengali characters.

The Persian inscription, unfortunately, is in a very bad state of preservation. Only the following portion can still be made out :—

(1) پادشاهی عادل شاه عالم بهادر

(2) سنه ۱۱۲۴ . . . . . .

"The just king Shāh 'Alam Bahādur . . . . . year 1124."

The year corresponds to 1716 A.D. Shāh 'Alam I Bahādur was the eldest son of Aurangzeb and came to the throne in 1707, and died in 1712.

The second inscription has been deeply incised and runs as follows :—

(1) Śrī-Śrī-Surgga-[1] Nārāyaṇa-deva Śaumāreśvara Gadā-dhara Simhena Ja[2]
(2) -vanaṁ jitvā Guvākalhāṭyām=idam=astraṁ prāptaṁ Śāke 1604.

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[1] Read *Svargga*.

[2] Read *ya*.

"The illustrious Svargga-nārāyaṇadeva Gadādhara Siṁha, the lord of the Saumāra (country), having conquered the yavanas (*i.e.*, Muhammadans), obtained this weapon at Guvākhāti."

This proves that the guns were obtained by Gadādhara Siṁha when he finally expelled the Muhammadans from Gauhāti in 1682 A.D.[1] Two guns bearing similar inscriptions have been mentioned by Mr. Gait, but they do not bear any Persian record. The most interesting point about this gun is the Persian inscription which shows that the gun was an important one in the ordnance department of the Mughal Empire. Evidently it was retaken by the Muhammadans. But no record of a Muhammadan war in 1711 A.D. is to be found in Mr. Gait's book, who has exhausted all the available materials of Ahom history.

The second inscription belongs to an earlier period. The date on it is Saka 1560 = 1638 A.D., which is the year of the invasion of Assam by the Muhummadan Governor of Bengal and Prāṇa-Nārāyaṇa, the Koca King of Kuch-Bihar. At that time Pratapa Siṁha *alias* Susengpha or Buddha Svargga-Nārāyaṇa deva was on the throne of Assam.[2] The name in the inscription is somewhat different. It is Sattra-Svarga-Nārāyaṇa-deva. It cannot be referred to Sattrājit the Hindu zamindar of Dacca who accompanied the expedition headed by the Sayyids Hakim and Abu Bakr.[3] The epithet is most probably another surname of Pratāpa Siṁha.

The inscription runs as follows :—

1. Saumāreśvara Srī-Srī Sa.
2. -ttra-svargga-nārā (?) yaṇasya Sāke 1560.

"In the Śaka year 1560 (*in the reign*) the illustrious Sattra-svargga-nārāyaṇa, the lord of Saumāra."

Saumāra is one of the old names of Assam. I found this name in the Journal of the Sāhitya Pariṣad, Rungpur Branch.[4]

Pūrvve Svarṇa nadīṁ yāvat Karatoyā ca paścime,
Dakṣiṇe Mandaśailaś=ca uttare vihagācalaḥ;
Prastāre caiva vyāsārddhaṁ yojananañ-ca pañcakaṁ,
Ayutatrayañ=ca trisrotaḥ pañcodbhava tathā daśa;
Aṣṭakonañca Saumāraṁ yatra dik-kara vāsinī
Yogini Tantra 10*th Paṭala.*

I am indebted to Pandit Vinoda Bihāri Vidyāvinoda and Dr. T. Bloch for many valuable corrections.

1 Gait's History of Assam, p. 161.
2 *Ibid.*, p. 103.
3 *Ibid.*, p. 105.
4 *Rangapura-śākhā-Vaṅgīya-Sāhitya-Pariṣad-patrikā*, Vol. iii, pt. ii, p. 58.

42. Mādhāinagar Grant of Lakṣmaṇa Sena.

By Rākhāla Dāsa Bandyopādhyāya.

In the beginning of 1907, my attention was drawn to a post-script added to Dr. Bloch's paper on the excavations at Basārh. It is stated therein that a copperplate grant belonging to the Asiatic Society of Bengal, and then in the possession of the late Babu Gangā Mohana Laskar, had a seal attached to it, the inscription of which was at least fifteen hundred years old and so considerably older than the inscription on the plate itself.[1] Further enquiries in the Society elicited that the plate had been lent to Babu Gangā Mohana through the then Joint Philological Secretary, Mahāmahopādhyāya Haraprasāda Śāstrī, for decipherment. The copperplate was sent to the Society by Mr. C. W. McMinn, of Tippera. At the time of his death Babu Gangā Mohana Laskar was a Deputy Magistrate of Dacca. Enquiries about this copperplate were made of his father and widow. From his father we learnt that the widow had two copperplates in her possession, one of which belonged to the Asiatic Society of Bengal. The other is said to have been sent to Babu Gangā Mohana by a member of the Indian Civil Service. At the request of Mahāmahopādhyāya Haraprasāda Śāstrī, Babu Gangā Mohan's father sent this copperplate to him with the statement that this was the copperplate belonging to the Society. But this plate is certainly not the one described by Dr. Bloch. Dr. Bloch has published a facsimile of the seal and read a few lines of the Tippera plate, so there is no doubt about the fact that the Tippera plate belonging to the Society is still missing, while this plate is a new one. Babu Gangā Mohana's father, Babu Hari Mohana Laskar has now been persuaded to send the other plate to Pandit Sāstri when this plate is returned to him. I fully believe that the plate now in the possession of Babu Gangā Mohana Laskar's widow is the Tippera plate presented by Mr. McMinn to the Asiatic Society of Bengal. At a future date I hope to edit the Tippera plate. Nothing definite is known about the *provenance* of the plate which forms the subject-matter of this paper.

In 1899, Babu Prasanna Nārāyaṇa Chaudhuri, Government Pleader of Pābnā in Eastern Bengal, published an account of a grant of Lakṣmaṇa Sena. On comparing his readings with mine, I find that these two copperplates agree to such an extent even in the minutest details that there can hardly be any doubt as to their identity. According to Babu Prasanna Nārāyaṇa,

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[1] Annual Report of the Archæological Survey of India, 1903-4, pp. 120-21.

the copperplate was discovered by one Raghunātha Buniā in the village of Mādhāinagara, police station Raiganj, sub-division Sirājganj, district Pābnā. Prasanna Babu's account was published in 1899 in a now defunct Bengali periodical the *Aitihāsika Citra*, edited by Babu Akṣaya Kumāra Maitreya.[1] It is stated therein that twenty or twenty-five years ago (*i.e.*, about thirty to thirty-five years hence) Raghunātha Buniā discovered this copperplate while clearing the jungle in his allotment for cultivation. Mādhāinagara is on the borders of the Nimgāchi forest in Pābnā. People say that near Mādhāinagara the palace of King Virāṭa once stood. Even now there are large mounds of stone and brick about two or three miles in circumference in this neighbourhood. It is said that people have come upon masonry and carved stones while digging in the midst of these ruins. The present zamindār is trying to settle aboriginal Buniās in this tract by clearing away the jungle. Raghunātha Buniā used to worship the ten-armed figure on the seal as the goddess Durgā. In 1899 Babu Durgānātha Tālukdar, a pleader in Sirājganj, obtained the plate from Raghunātha and gave it to Babu Gopi Candra Sena, a Vaidya, for decipherment. Mr. C. A. Radice, the then Magistrate of Pābnā, hearing of the discovery, requested Babu Gopi Chandra to hand it over for despatch to the Asiatic Society of Bengal or some other similar institution. Babu Gopi Candra handed over the copperplate to the Subdivisional Officer of Sirājganj who sent it to the Magistrate. At the end of this paragraph Babu Prasanna Nārāyaṇa announces that the plate has been handed over to him for decipherment, and will be sent to the Asiatic Society of Bengal or some other institution as soon as the decipherment is finished. After this nothing is known about this copperplate. After a lapse of ten years the plate makes re-appearance from Dacca. In the Society itself nothing is known about this copperplate. Enquiries made of Babus Prasanna Nārāyaṇa Chaudhuri and Akṣaya Kumāra Maitreya did not elicit any reply, and so the history of this grant for the last ten years is not traceable.

The grant had been incised on a single plate of copper measuring $12'' \times 11\frac{3}{4}''$. There is a projection at the top of the plate to which a seal had been attached by a copper bolt. The seal is not of pure copper. Both sides of the plate are inscribed. The engraving is well executed, but unfortunately the badly corroded state of the plate, at its lower extremities, on both sides, renders complete decipherment of those portions impossible. The characters belong to the Northern class of alphabets, and may be specified as the twelfth century Bengali, well-known from the Deopārā[2] inscription of Vijayasena and the grants of Lakṣmaṇa Sena[3] and Viśvarūpa Sena.[4] The language is Sanskrit throughout. Each side of the plate bears twenty-nine lines of writing. The

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1 ঐতিহাসিক চিত্র, প্রথম বর্ষ, পৃঃ ৯২, ৪২৩। বঙ্গ ২৩৯ in the Society's Library.
2 Epigr. Ind., vol. i, p. 307.
3 J.A.S.B., 1873, pt. i, p. 11, and 1900, pt. i, p. 61.
4 J.A.S.B., 1896, pt. i, p. 9.

first twenty-four lines contain thirteen or fourteen verses, lines 25 to 49 are in prose, while the last six lines contain three or four of the usual imprecatory verses.

The inscription records the grant of the village Dāpaṇiyāpāṭaka in the **Pauṇḍravarddhana bhukti** by **Parameśvara Parama Nārasiṁha-Paramabhaṭṭāraka-Mahārājādhirāja Lakṣmaṇasena Deva** to a Brāhmaṇa named Govindadevaśarman. The first two verses eulogise the Moon. From him sprung Vīrasena famous in the Paurānic legends. In the race of Vīrasena sprung Sāmanta Sena the chief of the race of *Karnnāṭa Kṣatriyas*. From Sāmanta Sena was born Hemanta Sena. His son was Vijaya Sena. His son Ballāla Sena married a daughter of the Cālukya kings. Ballāla's son Lakṣmaṇa Sena defeated the King of Benares. The last four verses are in a fragmentary state and there is no hope of restoring them, so that the adjectives of Lakṣmaṇa Sena are not very clear. The wife of Ballāla Sena is named Rāmadevi (v. 9). In his youth Lakṣmaṇa Sena is said to have taken his pleasure with the females of Kalinga (v. 11). This seems to indicate that during the lifetime of his father, Lakṣmaṇa Sena led an army into Orissa. There is also a reference to the King of Kāśī or Benāres being defeated in a battle, but the rest have been lost.

Up to date three copperplate grants of Lakṣmaṇa Sena have been brought to light. The Tarpaṇadighi grant and the Ānulia grant have been published in the Society's *Journal*.[1] The third, said to have been discovered in the Sunderbans, has been noticed in an essay on the Bengali language and literature **वङ्गभाषा ओ साहित्य विषयक प्रस्ताव** by Pandit Rāmagati Nyāyaratna. It has since been lost sight of. The first seven verses of these three grants are identical. The peculiarity of the Mādhāinagara grant is that its verses do not resemble any of the verses in the three plates mentioned above. Two of its verses resemble two verses in the Deopārā inscription of Vijaya Sena. The sixth verse of this grant resembles the sixteenth verse of the Deopārā inscription. The fifth verse of the Deopārā inscription coincides, to some extent, with the fourth verse of this grant. The Mādhāinagara grant brings four historical facts of the period of the Sena Kings into prominence :—

(1) It proves that the Sena Kings were Southern Indian by descent and probably Dravidians. This fact, I hope, will settle the dispute about the Sena Kings being Bengalis, Kayasthas or Vaidyas. They were most probably a relic of the invasion of Bengal by Rājendra Cola, and owed their territorial possessions to that monarch.

(2) Ballāla Sena married a daughter of the Cālukya kings and that one of his wives was named Rāma Devi (v. 9).

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[1] J.A.S.B., 1873, pt. i, p. 11, and 1900, pt. i, p. 61.

(3) Lakṣmaṇa Sena invaded Kaliṅga and so consequently Orissa, (v. 11) and defeated the King of Benares in a battle. The invasion of Benares by Lakṣmaṇa Sena has been mentioned in the Madanapāḍa inscription of his son, Viśvarūpa Sena. From this we learn that he built a pillar of victory (जयस्तम्भ) at Benares :—

क्षेत्रे विश्वेश्वरस्य

(4) In the thirty-second line of this grant we find that Lakṣmaṇa Sena subdued Kāmrūpa or Assam. We know from the Deopārā inscription that Vijaya Sena also led an invasion into this country.[1]

Some years ago Babu Nagendra Nātha Vasu proved that Ballāla Sena lived in Śaka 1091, *i.e.* 1169 A. D., on the strength of a date found in a copy of Dānasāgara by Ballāla Sena. The copy which contains this date is said to have been obtained by the author from Assam.[2] This date has been accepted by Dr. Kielhorn in his Synchronistic List for Northern India.[3] But one fact about the date seems never to have been adequately considered. Two inscriptions from Bodh Gaya are dated in the era of Lakṣmaṇa Sena. They are records of a king named Aśokacalla of a country named Sapādalakṣa. The dates in them are expressed :—

(1) Srimal = Lakhvaṇa Senasy = ātīta-rājye Saṁ 51, Bhādra dine 29.

(2) Srimal = Lakṣmaṇa-Sena-devapādānām = atīta-rājye Saṁ 74, Vaiśākha vadi 12 gurau.

According to Nagendra Babu's theory, Lakṣmaṇa Sena was living at the time when these inscriptions were incised. But one serious omission is noticeable in the wording of these two dates. In all other inscriptions, the date is expressed :—"Parama-bhaṭṭāraka-Mahārajādhirāja . . . . . Vijayarājye" or "Pravardhamāna Vijaya-rājye." But here we have "*atīta rājye.*" There is a striking resemblance between this inscription and the melancholy colophon of copy of *Yogaratnamālā* in the Cambridge University's Library,[4] which runs as follows :—

"Parameśvar = etyādi-rājāvali-pūrvvavat | Śrīmad = Govindapāladevānāṁ *vinaṣṭa-rājye* Saṁ 39, Bhādra dine 14."

The best way of rendering the dates of the two inscriptions mentioned above is to explain them as "In the reign of Lakṣmaṇa Sena (now) expired, in the year . . ." It seems that Lakṣmaṇa Sena was dead before the 51st year of the Lakṣmaṇa Sena era. If Lakṣmaṇa Sena was dead before 51 La—Saṁ how could Bakhtyar Khiliji drive him from Nudiah !!! The death of Lakṣmaṇa Sena before the Mahomedan conquest is established

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1 Epigr. Ind., i, p. 309.
2 J.A.S.B., 1896, pt. i, pp. 20-23.
3 Epigr. Ind., vol. viii, *app.*
4 Catalogue of Manuscripts, University Library, Cambridge. Buddhist Sanskrit MSS. by C. Bendall, M.A., p. iii and 190.

by two different epigraphs. Lakṣmaṇa Sena died in peace, so we have the word *atīta-rajya*, but Govinda-Pāla was ousted from his kingdom by an alien race and this is the reason for the use of the word *Vinaṣṭarājya*. After the decease of Lakṣmaṇa Sena there seems to have been some dispute about the succession, and this may be the reason why Lakṣmaṇa's successor has not been mentioned.

TEXT.

१। ॐनमो नारायणाय ॥

यस्याङ्के शरदम्बुदोरसि तड़िल्लेखेव गौरी प्रिया
देहार्द्धेन हरिं समाश्रि

२। तमभूद्यस्यातिचित्रं वपुः।
दीप्तार्क्कद्युतिलोचनत्रयरुचा घोरं दधानो मुखं
देवत्रासनिरस्तदानव

३। गजः पुष्णातु पञ्चाननः ॥ (१)
स्वर्गङ्गाजलपुण्डरीकमम्रतप्राघारधाराग्रहं
प्रोद्भारद्रुमपुष्पमौक्तिरुचि

४। खालङ्कारमुक्तामणिः।
क्षीराम्भोनिधिजीवित(ं) कुमुदिनीवृन्दैकवैहासको
जीयान्मन्मथराजपौष्टि

५। कमहाप्राप्तिद्विजश्चन्द्रमाः ॥ (२)
त्रिभुवनजयसम्भृतावलृप्तैः क्रतुभिरवाधितसत्त्रिणोऽमराणां।
त्रजनिष्ट

६। तदन्वये धरित्रीवलयविप्रुट्छ्वलकीर्त्तयो नरेन्द्राः ॥ (३)
पौराणीभिः कथाभिः प्रथितगुणगणे वीरसेनस्य

७। वंशे
कर्म्माटक्षत्रियाणामजनि कुलशिरोदाम सामन्तसेनः।
क्षत्वा निर्व्वीरमुर्व्वीतलमधिकतरान्तृप्यता वा

८। कनद्यां
निर्म्मुक्तो येन युध्यद्रिपुरुधिरकणाकीर्म्मधारः क्षपाणः ॥ (४)
वीराणामधिदैवतं रिपुचमूमारा

९। ङ्कमल्लव्रत

ल्लस्मादिल्लमयनीयशौर्य्यमहिमा हेमन्तसेनोऽभवत् ।
क्षीरोदाधरवाससो वसुमतीदेव्या

१०। यदीयं यशो

रत्नस्येव सुमेरुमौलिमिलितं क्षौमश्रियं पुष्यति ॥ (५)
अजनि विजयसेन स्तेजसां राशिर

११। स्मात्

समरविल्लमराणां भूभृतामेकशेषः ।
इह जगति विषेहे येन वंशस्य पूर्व्वः
पुरुष इति सुधांशौ

१२। केवलं राजशब्दः ॥ (६)

भूचक्रं कियदेतदाहृतमभूद्यद्दामनस्याङ्गिणा
नागानां कियदास्यदर्पमुर

१३। साल्लप्यन्ति गढ़ाङ्गयः । (?)

एकाहाद्यदनूरुरक्षति कियन्मात्र त्तदप्यम्बरं
यस्येतीव यशो क्रिया त्रिभुव

१४। नव्याप्यापि नो हृप्यति ॥ (७)

यस्मादशेषभुवनोत्सवकारणेन्दुर्व्वल्लालसेनजगतीपतिरु-
ज्जगाम । यः

१५। केवलं न खलु सर्व्वनरेश्वराणामेकः समग्रविबुधामपि
चक्रवर्त्ती ॥ (८)

धराधरान्तःपुरमौलिरत्नचा

१६। लुक्यभूपालकुलेन्दुलेखा ।
तस्य प्रियाभूद्बहुमानभूमि र्ल्लक्ष्मीपृथिव्योरपि रामदेवी ॥ (९)

* * *

१७। वसुदेवदेवकसुतादेहान्तरास्यामिव
श्रीमल्लक्ष्मणसेनमूर्त्तिरजनि क्ष्मापालनारायणः ।

१८। यन्मय जन्म निःसहमिलदिम्बानुवच्चञ्चलात्

क्षष्टेनाधि * * धिक * कमि * * * * * * * * ॥ (१०)

१९। स्याद्गौड़ेश्वरश्री हठहवण (?) कर्म्म यस्य कौमार केलिः-

कलिङ्गेनाङ्गनाभि * * * * * * * * * *

२०। वे यस्य पूर्व्वः। येनासौ काञ्चिराजः समरभुवि जितो यस्य

* * * धाराभीर * पा * ष्यति *

२१। स्वरणजरजसा निर्म्ममे कार्म्मणानि ॥ (११)

आकौमारं समर क्षति ... ...

२२। मिव दिग्भागीश्चितास्ते विमुक्ताः। ह * * * वपुर्व्विकलय्य (?)

तस्य ति * ष्ठौ प्रविष्टाः ... ...

२३। च हि क्षत्रियाणां क्षपाणः ॥ (१२)

यत्रारामद्रुमदलरुचा प्रैवाल ... ...

२४। पुरो सञ्चिता भूः। प्राणान् मुञ्चन्त्यवनिपतयो ... ...

... ... ॥ (१३)

२५। * * * निर्गते खलु धार्य्यग्रामपरिसरसमवासितश्रीमद्वा

राजाधिराज ... ...

२६। परमभट्टारकमहाराजाधिराजश्रीवल्लालसेनदेवपादानुध्यात

श्री ... ...

२७। ... ...

२८। ... ...

२९। ... ...

Reverse.

३०। विक्रमस्य वीरचक्रवर्त्ति सार्व्वभौम ... ... सोमवंशप्रदीप

राजप्रतापनारायणपरमे

३१। दीक्षितपरमब्रह्मक्षत्रियसुमेरु ... ...

क्रीड़ावधूतमल्लेवकेलिविकलोक्षतक

३२। लङ्कविक्रमवश्रीक्षतकामरू (प) वनीमण्डलैकचक्रवर्त्ति

गौड़ेश्वरपरमे

३३ । स्वरपरमनारसिंहपरमभट्टारकमहाराजाधिराज-
श्रीमल्लक्ष्मणसेनदेवपादा विजयिनः समु
३४ । पागताशेषराजराजन्यकराङ्गीराणकराजपुत्रराजामात्य
महापुरोहितमहाधर्म्माध्यक्षमहासान्धि-
३५ । विग्रहिकमहासेनापतिमहामुद्राधिकृत-अन्तरङ्ग
बृहदुपरिकमहाक्षपटलिकमहाप्रतीहार
३६ । महाभोगिकमहापिलुपतिमहागणस्कदौःसाधिक
चौरोद्धरणिकनौबलहस्त्यश्वगोमहिषाजा-
३७ । विकादिव्याप्तकगौल्मिकदण्डपाशिकदण्डनायकविषय-
पत्यादीनन्यांश्च सकलराजपादोपजी-
३८ । विनोऽध्यक्षप्रचारोक्तानिहाकीर्त्तितान् चट्टभट्टजातीयान्
जनपदान् क्षेत्रकरान् ब्राह्मणान् ब्रा
३९ । ह्मणोत्तरान् यथार्हं मानयन्ति बोधयन्ति समादिशन्ति च
मतमस्तु भवताम् । यथा श्रीपौण्ड्रवर्द्धनभू
४० । क्त्यन्तःपातिवरेन्द्र्यां कान्तापुराद्दक्षौ रावणसरसि ब्किस्थाने
पुर्व्वे चड़स्यसापाटकपश्चिमभूः सीमा
४१ । दक्षिणे गयनगर उत्तरभूः सीमा पश्चिमे गुण्डी स्थिरा पाटक
पुर्व्वभूः सीमा उत्तरे गुण्डी दापर्णिया द-
४२ । क्षिणभूः सीमा इत्यं चतुःसीमावच्छिन्नगोयवगोचाराद्यस्य
च देवब्राह्मणपाल्य भवद्भिः एक-
४३ । नवतिखाड़िकाधिकभूखाड़ीशतैकात्मकसंवत्सरेण-
कपर्द्दकाष्टषष्टिपुराणाधिकशतमूल्यकाधिको दापर्णिया
४४ । पाटकः । ससाटविटपः सजलस्थलः
सगर्त्तोषरः सगुवाकनारिकेलसच्च द-
४५ । (ण्डापराध परि-) हृत सर्व्वपीड़ोऽचट्टभट्टप्रवेशः (च)
किञ्चित् प्रग्राह्यस्तृणयुतिगोचरपर्य्यन्तः दा
४६ । (मोदर)देवशर्म्मणः प्रपौत्राय श्रीरामदेवशर्म्मणः पौत्राय
कुमारदेवशर्म्मणः पुत्राय कौशिक

४७। सगोत्राय × × × × × प्रवराय ऋग्वेद-
पैप्पलादशाखाध्यायिने शून्यशाविक

४८। श्रीगोविन्ददेवशर्म्मणे विधिवदुदकपूर्व्वकं भगवन्तं
श्रीमन्नारायणभट्टारकमुद्दिश्य

४९। मातापित्रोरात्मनश्च पुण्ययशोऽभिवृद्धये सप्तविंशश्रावण-
दिवसे * * * पूर्व्वकमूलाभिषेकः

५०। * * ऐन्द्रमहाशान्ति * * * * * * * * तगति * * *
* * * णिकादि * उच्छ्ज्याचन्द्रार्क्कक्षिति

५१। समकालं या (वत् भूमिच्छिद्र) न्यायेन प्रदत्तोऽस्माभिः
तद्भवद्भिः सर्व्वैरेवानुमन्त

५२। व्यं भाविभिरपि नृपतिभिरपहरणे नरकपातभयात्
पालने धर्म्मगौरवात् पालनीयं। भवन्ति

५३। चात्र धर्म्मानुशंसिनः श्लोकाः भूमिं यः प्रतिगृह्णाति यश्च
भूमिं प्रयच्छति उभौ तौ पुण्यकर्म्मा

५४। (णौ नियतं स्वर्गगामिनौ ॥ बहुभिर्व्वसुधा दत्ता)
राजभिः सगरादिभिः यस्य यस्य यदा भूमि

५५। स्तस्य तस्य तदा फलं ॥ (आस्फोटयन्ति पितरो वल्गयन्ति-
पितामहाः)
भूमिदोऽस्मत्कुले जातस् सन

५६। स्त्राता भविष्यति (॥) ... ...

५७। ... ...

५८। ... ...

Translation of Extracts.

Verse 1.—In whose lap, just like a streak of lightning in the breast of autumnal cloud sits Gauri, whose superbly beautiful body in its half was connected with Hari, who bears a face which is terrible on account of having three eyes like burning sun in splendour, who has put down the demons like elephants, causing fear to the minds of gods. May that five-faced god give prosperity.

Verse 2.—The lotus in the water of the celestial Ganges, the receptacle of the stream of nectar, the flower of the tree of love, the jewel of the head-ornament of Śiva, the life of the ocean of milk, the sole creator of the laugh of water-lilies, and the great priest of the propitiatory rite of the growth of the god of love. May that moon be victorious.

Verse 3.—In his lineage arose kings who performed uninterrupted sacrifice to the immortals with wealth acquired by the conquest of the three worlds, and whose fame was not confined within the circle of the earth.

Verse 4.—In the dynasty of Virasena whose qualities have been related in the Pauranic legends, was born Sāmanta Sena who was the head-garland of the clan of the Karṇata Kṣatriyas, and who making the earth totally devoid of warriors, and being satisfied washed his sword in the celestial river whose edge was besmeared with the drops of blood of the fighting enemies.

Verse 5.—From him was born Hemanta Sena (verse 8). From him was born Vallāla Sena (verse 9), who married a Rāmadevī who was a daughter of the Cālukya family of Kings (verse 10). Their son was Lakṣmana Sena (verse 11) who conquered the King of Gauḍa, Kaliṅga and Kāśī.

Line 39.—In Barendrī, included in the Pauṇḍravardhaṇa bhūkti, near Kāntāpura, some land is given to Govinda devaśarman, the son of Kumāra, grandson of Rāmadeva, and great-grandson of Dāmodara.

POSTSCRIPT.

I have since been informed by Babu Akṣaya Kumāra Maitreya that the Collector of Pabna sent the plate to the Asiatic Society of Bengal, who gave a receipt for the plate. This statement has since been confirmed by Pandit Umeśa Candra Vidyāratna, who saw the plate in the possession of the late Babu Gangā Mohana Laskar in the house of Mahāmahopādhyāya Hara Prasāda Śāstrī.[1] I am much indebted to Mr. G. H. Tipper, M.A., who has kindly undertaken to analyse the plate.

R. D. Banerji.

[1] वङ्गालमोहमुद्गर pp. 96—97.

43. Supplements to the Panjābī Dictionary, No. 1.

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The following is a first instalment of the materials under collection to supplement the existing Panjabi Dictionary. Two series of *Contributions to Panjâbî Lexicography* have already appeared in the *Indian Antiquary*, and a third series is nearly ready. A *Glossary of Pahârî* by Paṇḍit Ṭîkî Râm Joshî is also passing through the Press for this Journal.

A

ā, pronominal suffix, to thee, for thee.
abbaḷ haftā, *m.*, Saturday.
aḍḍokhoṛe, *m. pl.*, unevennesses, ruts in road.
adhlāmū̃, half and half.
adhlhūṭhā, *adj.*, appetite half satisfied.
adhmāhṇū, *m.*, abortion of 4 or 5 months.
adhraṇgī, *f.*, palsy.
aḍrā., *adj.*, separate.
agath, *m.*, star rising in January about midnight.
āggaḷ, *m.*, word in *khaḍḍī* or well.
aggõwāḷī, *f.*, meeting a person.
ainj, *adv.*, thus, bravo!
air, *m.*, tracks, lines on ground.
ajokā, *adj.*, belonging to to-day or this day next week.
akāṇā, *v. tr.*, weary, bore.
akhe, he said, they said, one says (for *ōs ākhĕā*).
alhar, *adj.*, beardless.
alū̃, *adj.*, beardless.
aṇchāttā, *adj.*, not passed through sieve.
anchōp, *adv.*, quietly.
āndā, *pa. part.*, brought (rest of verb not used).
andāṛhīā, *adj.*, beardless.
aṇdī, *f.*, iron band round *thīppā* in *khrās* (corn-mill).
āṇke, having come (from *auṇā*, come).
anrhātā, *m.*, night-blindness.
aṇwāṇā, *v.*, cause to bring.
ar, *m.*, one of cross pieces in cart-wheel.
ār, ārpār, *m.*, consideration, thought, attention.
aṛāṇā, *v.*, low (of cattle, buffaloes).
areṛ, *m.*, the biggest of the *arēṛīā̃*, also *reṛ*: see next.
areṛṇā, fix *areṛīā̃*, on *māhl*, also *reṛṇā*.
aṛiṇgṇā, *v.*, low (especially of buffaloes).
artānā, *m.*, night-blindness.
aṭhāīā̃, aṭhāīwā̃, *adj.*, twenty-eighth.
aṭhīwā̃, *adj.*, twenty-eighth, especially twenty-eighth day of Ramẓān.
āthṛi, *m.*, full-time servant of farmers.
atte, *adv.*, altogether, with negative, not at all.
atthar, *f.*, tear.

atthrū, *m.*, half choking in drinking.
augghī, *f.*, bunch of thread in loom.
auhr, *f.*, straitness, difficulty (illness, &c.).
auhṛ, *f.*, rainlessness.
auj, *m.*, trouble.
aukaṛ *f.*, difficulty, straitness.
aukhat, *f.*, difficulty.
aukṛā, *adj.*, inimical, tyrannical.
auḷā, *m.*, niche in wall for warming milk.
auḷū, *m.*, hollow into which water falls from *nisār*.
awāghatt, *adv.*, suddenly.
awāzār, awājār, straitened, in difficulties.

B

bā, *f.*, sense, intelligence.
babbar, *m.*, large bit of earthenware.
babbrī, *f.*, small bit of earthenware.
baccā, *m.*, broad iron hoop inserted in well to preserve it.
baddhā ruddhā, *adj.*, bound, unwillingly.
badobadī, *adj.*, by force, under compulsion.
bāggaṛ, *f.*, paring of lower end of *narī* and *ḍaṭṭā* in huqqa (*kaḍḍhṇā*).
bagalgan, *f.*, offensive smell from mouth.
bahāḷṇā, *v.*, seat.
baiṛ, *m.*, string joining two wheels of *khambaṛ* in *carkhā*.
bājjū, *m.*, cross pieces of wood in *dharakkaṛ*.
bākrā, *adj.*, pertaining to sheep, goats, hence collective = sheep and goats.
bakẖāhndī *m.*, quarreller. from *bakẖāhṅd m.*, quarrel, noise.
balellaṛ, *adj.*, senseless, foolish.
banjar, *adj.* or *n. m.*, poor, almost barren land.
bannh, *f.*, hump of bull.
banne, *adv.*, outside.
bannī *f.*, little *bannā*, or bank between fields.
baraṛ, *m.*, rope round *baiṛ*, to prevent breakage.
bāṛī, *f.*, preparation of green parched *jaũ* for eating.
barkī, *f.*, mouthful.
bāṭī, *f.*, iron or brass vessel.
bāuḷā, *adj.*, mad.
beraṛa, *m.*, add, 'wheat and *jaũ* (barley).'
bhā, *m.*, opinion, view, *mere bhā dā*, according to my opinion.
bhagāṇā, *v.*, squint (of eyes).
bhaggī, *f.*, accusation, slander.
bhambīrī, *f.*, circular piece of wood in spinning-wheel between *khambaṛ* and *munnā*.
bhān, *f.*, bits of cotton fallen from pod = bhann.
bhaŋgāṇā, *v.*, squint (of eye).
bhankaṛ, *m.*, change for money.
bhantṛik, *m.*, plan, arrangement.
bhārū, *m.*, ram, big lamb.
bheṭṇā, *v.*, defile (ceremonially).
bhiṛāī, *f.*, fighting, gen. laṛāī bhiṛāī.
bhitt, *m.*, half of double door, window.
bhiṭṭaṛ, *adj.*, old, useless (of earthen vessel).
bhōg. *m.*, account, mention, (pāṇā).
bhōhrā, *m.*, women's and girls' spinning bee.
bhrā, *m.*, brother.
bhurhaṛĕāṇ, bhuṛhĕāṇ, *f.*, smell of burnt cloth, leather, &c.
bhussā, *adj.*, pale through illness. heat. &c.

bibta, *f.*, trouble, affliction = biptā.
billā, *m.*, non-folding Quran stand with legs, wooden catch for door.
biḷṭī *f.*, receipt (especially railway), article consigned.
bīṛā, *m.*, roll of tobacco composed of three laṛīā̃.
bīṛī, *f.*, thread round *tarakḷā* of *carkha*.
bohjā, *m.*, pocket.
boṛmā, *m.*, *ghī* and sugar (*khaṇḍ*).
brū̃, *f.*, gen. plur. brūā̃, threshold of door.
bucc, *m.*, small tuft of shrub, &c.
bujhārat, *f.*, riddle.
bujjī, stopper made of feather in shuttle (in loom).
būlī, *m.*, kind of bull-dog.
bulle, *m.*, *pl.*, (luṭṇe) amuse oneself, have good time.
būṇḍā, *m.*, tail of bird.
būṇḍā, *m.*, rope attaching *gādhī* to *tīr*.
būrā, *m.*, sawdust, fine wood shavings.
buṛkṇā, make noise like camel.
buttṇā, vomit.

C

cābbī, *f.* (1) key, (2) iron peg in iron sugarcane-press.
cākhṛī, *f.* stick connecting fork of *gādhī*.
cakkā, *m.*, heap of wooden sleepers.
cakkaḷ, *m.*, vertical cogged wheel of well.
cakkīrā, *m.*, wood pecker.
cakkṇā, *v.*, lift, = cukkṇā.
cambṛī., *f.*, one of 4 iron nails in cart.
cāmcṛikk, *f.*, bat (animal).
camṛī, *f.*, bit of leather in *guddī* of *carkhā*.
cāṇā, *v.*, lift.
candra, *m.*, hail.
caṇḍī, *f.*, corn on foot, &c.
cappṇā, *m.*, earthen lid of vessel.
car, *f.*, oblong hole in ground over which large quantities of food are cooked.
cāṛāpāṛā, *m.*, compensatory days inserted in Hindu month.
carakḷi, *f.*, vertical cogged wheel of well.
caṛepṛī, *f.*, bit of caked earth, *e.g.* in pond.
caṭākā, *m.*, slap.
cāṭī, *f.*, *gharā* with wide mouth.
caukhar, *m.*, cattle.
chābṛī, *f.*, shallow basket, especially for sweetmeats.
chacch, *f.*, long hair (animal).
chaheṛū, *m.*, scum of boiled *ghī*.
chajj, *m.*, basket.
chaillī, *f.*, deep basket made of reeds.
chaiṇī, *f.*, small iron, pointed wedge.
challī, *f.*, ear of maize, roll of thread on *tarakḷā* in *carkhā*, calf of leg.
chāṇ, *m.*, what is left in sieve after *āṭā* has passed through it.
chattā, *m.*, man's lock of hair.
chātta, *adj.*, what has passed through sieve.
chappar, *m.*, instep, eyelid.
chaṛ, *m.*, long crook for bringing down branches.
charāchāṇḍ, *adj.*, alone, unmarried.
chattrī, *f.*, pigeon-roost.
chekṛe, *adv.*, finally.
chenjā, *m.*, large basket made of twigs.
chenjī, *f.*, small basket made of twigs.

cheṛū, *m.*, herdsman.
cheti, *adv.*, quickly.
chetnī, shoemaker's iron-pointed tool.
chīhṛā, *m.*, hard *guṛ*.
chikkā, *m.*, rope muzzle for cattle.
chill, *f.*, rupee.
cho, *f.*, ceremonial defilement.
chohḷī, *f.*, haste.
chōī, *f.*, dry leaves of sugarcane.
chōṇā, *v.*, defile ceremonially.
chūṇā, *m.*, earthen cover for vessel.
cilittar, *m.*, deceit.
cilittrī, *adj.*, deceitful.
cinjh, *f.*, point, nib of pen.
cippī, *f.*, broad, short-handed wooden spoon for hot *guṛ*.
cirkā, *adj.*, late.
citt, *m.*, mind, heart.
cittar, *m.*, little round ornament.
copā, *m.*, iron pointed digging instrument.
corīchappī, *adv.*, by stealth.
cūcā, *m.*, chicken.
cugarn, *m.*, eclipse of moon, sun.
cuhā, *m.*, quarter of *paṛōpī*.
cuhāī, *f.*, quarter, especially of land.
cukaī, *f.*, pulley in loom.
cūḷī, *f.*, Hindū word for *krūḷi*, rinsing mouth.
cumba, *m.*, round hole over which food and *rahu* are cooked.
cūṇḍwī, *f.*, plaited lock over women's temple.
cuŋg cor, *m.*, thief with whom stolen property is left.
cupkītā, *adj.*, quiet, silent.

D

ḍāḍ, *f.*, one of 4 pieces of wood between upper and lower parts of cart.
ḍag, *m.*, kind of common dog.
ḍākarnā, *v.*, vomit.
darāṇak, *f.*, wood passing through *tur* in loom = gadrāṇak.
daṛopā, *m.*, measure containing two *ṭopas*.
ḍaṭṭā, *m.*, upright stem of huqqa.
dalhūṭhā, *adj.*, with appetite half satisfied.
ḍall, *f.*, old, unused well.
daḷṇā, *v.*, chop firewood, break grain.
dambūsā, *m.*, tool for flattening down road.
ḍāṇḍ, *f.*, swelling from blow (caṛhṇī).
dāttar, *m.*, large toothless sickle, crook for bringing down branches.
ḍaurĕā hoĕā, mad, foolish.
dawākhā, *m.*, recess in wall for lamp.
dhaddhar, *m.*, ringworm.
ḍhakḷā, *m.*, large lump of cowdung.
dhāṇā, *v.*, be of effect, have effect.
ḍhāngar, *m.*, tall leafy plant (about 10 feet high).
dhaṛā, *m.*, dry *āṭā* added to *chapātī*.
dharakkaṛ, *m.*, two cross beams in *ḍhoḷ* and 1 in *carakḷī*.
dharkonnā, *m.*, berry of *dhrek* tree, man of sour disposition.
dhauṛ, *m.*, wood next *taleāṭh*, under *parāṇā* (well).
dhauṛi, *f.*, bag-shaped leather, ready for colouring by *kikkar* bark.
ḍheṇḍhḷa, *m.*, big cake of cowdung.
dhikkṇa, *v.*, shove, drive.
ḍhiŋgṛī, expletive with *fulāṇī*.
ḍhoḍḍar-kã, *m.*, raven = ḍoḍḍar-kã.

ḍhoḷ, *m.*, horizontal wheel of well.
dhranjhṇā *v.*, cough violently.
dhrappaṛ, *m.*, large rash, flea-bites, marks of scratching.
dhrauṇā, *v.*, sink down, *e.g.*, centre of roof, ground.
dhrehmā, *m.*, gentle rain.
dhrūṇā, *v.*, drag.
dhuccṇā, *v.*, be washed (clothes, &c.)
dhumāṇa, *v.*, noise abroad.
dhumṇā, *v.*, get noised abroad.
dhupṇā, *v.*, be washed (*e.g.* clothes).
dhūr, *m.*, *rahu* while being cooked.
ḍicc, *adj.*, warned, annoyed.
ḍihũ, *m.*, sun.
ḍikkdārī, *f.*, trouble, annoyance.
ḍiūṛī, *f.*, wooden lamp-stand.
ḍoggar tāra, *m.*, name of a planet.
ḍokkaḷ, *adj.*, having large udder and giving little milk (camel, cow, buffalo).
ḍolṇā, *v.*, pour out.
ḍudhārnī, *f.*, vessel for boiling milk.
duhājjū, *m.*, duhājjaṇ, *f.*, twice married.
dukh, waḍḍā dukh, leprosy.
dullaṛ, *m.*, rope of two strands.
dusāṇgā, *m.*, piece of wood at end of warp.

G

gabbhē, *adv.*, under armpit.
gabbhī, *f.*, part between fingers and toes.
gadrāṇak, *f.*, wood passing through *tur* in loom (=darāṇak).
gāhd, long horizontal pole of iron sugar-cane press.
gaib, *f.*, dip in road, especially in pakka road.
gail, *f.*, track of cart.
gainṭhī, *f.*, pick-axe.
gāk, *m.*, purchaser.
gāḷā, *m.*, cross wood above millstone in *khrās*.
gandaḷṇā, *v.*, become muddy (water).
ganḍhṛī., *f.*, bundle.
gaŋgāḷṇā, *v.*, foul (water).
gaŋglĕā, *adj.*, muddied (water).
gann, *m.*, piece of wood in circular part of cart-wheel.
gannh, *f.*, bad smell.
gannī, *f.*, edge of eyelid (upper or lower).
gannī, *f.*, one of pieces of wood composing *ḍhoḷ* and *carakḷī*.
garle, *m.*, *pl.*, gargling.
garmī, *f.*, indigestion.
gaṛowā, *m.*, man who makes *guṛ*.
ghāhgā, *m.*, broken off neck of *ghaṛa* or *ṭiṇḍ*.
ghair, *f.*, sound of something which one attentively listens for.
ghair, *m.*, dull haze.
ghaṇ., *m.*, bees ?
ghasmailṛā, *adj.*, dust coloured, brown.
ghassā, *m.*, delay, loss, (laggṇā).
ghasunnā, ghasunn, *m.*, blow from fist.
ghaswaṭṭī, *f.*, touchstone.
ghattṇā, *v.*, used in composition with passive sense, *e.g.*, wāh ghatteā, was ploughed.
ghawã, *m.*, stick for stirring *rahu*.
ghirlī, *f.*, piece of wood, near *muṭhiya* in ox yoke.
ghīsī, *adj.*, sliding along ground.
ghommā, *m.*, absence of wind.
ghoṛi, *f.*, piece of wood supporting *marĕār* in *jhallaṇ*.
ghukkā, *m.*, (i) cowry, (ii) hole in *āḍ* or *ghaṛā* (paiṇā).

ghumaiḷ, *f.*, underground dove-cot.
ghurākī, *f.*, angry appearance of eyes (laiṇī, waṭṇī).
ghutkaḷ, *f.*, slander, back-biting.
gici, *f.*, part of back of neck.
giḷṭ., *m.*, swelling (glandular).
giḷṭī, small glandular swelling.
gir, *f.*, girī, *f.*, meat in fruit stone, edible part of mango.
girārī, *f.*, iron cogged wheel in iron sugar-cane press.
gīṭā, *m.*, stone.
gōggā., *m.*, child's word for bread.
gōmmā, *m.*, absence of wind.
gōt, *adj.*, wet (hojāṇā).
gubb, *f.*, blow with fist.
guḍḍī, *f.*, one of three upright pieces of wood in *carkhā*.
guggaḷ karnā, *v.*, spoil (an affair).
guggaḷṇā, *v.*, be spoiled (an affair).
gujāḷī, *f.*, wheat mixed with barley, better than *gojjī*.
gujjhṇā, *v.*, be hidden.
gulī, *f.*, pure *kaĩh*, bellmetal.
gum, *m.*, absence of wind.
guŋgaḷṇā, *v.*, became muddy (water).
guṭkā, *m.*, piece of iron in iron sugar-cane press.
guṭṭh, *f.*, direction between any two of four cardinal points of compass.
gutthī, *f.*, purse.

H

hãẽ mãẽ, *adv.*, without difficulty, easily.
haḷ, *m.*, oxen and plough, contrasted with *hall*, f., plough.
hālī, *ādv.*, at present, now.
hambṇa, *v.*, grow faint (wind, person).
hanāī, *adj.*, brown (paper).
hanakk, *adv.*, unjustly, without reason = nahakk.
haṇḍhāṇā, *v.*, wear out (tr).
haṇḍhṇā, *v.*, wear, wear out (intr.)
hanekṇā, spoil, gen. in passive of well, cart, *welna*, person (*e.g.* through cold).
haŋgīrā, *m.*, kind of large ground lizard.
hanorā, *m.*, pride, boasting = māṇ.
harbācī, *f.*, right or left side of jaw.
haṭṭ, *m.*, well.
haṭṭī, *m.*, man who sits on *gādhī* and drives the oxen.
hauḷṭā = hauḷā, light (not heavy), small.
hekh ! hekkhẽ, *interjection* (disbelief and astonishment).
hī, *f.*, side piece of bed or side door post.
hīyyā, *m.*, rainbow.
hohā, *m.*, slight puff of wind.
hūā ! *interj.*, used to incite dog.
hubārā, *m.*, one of radiating pieces of wood in *bair*.
hūī hā hā hā, *interj.*, to incite dog.
huliya, *m.*, description.
humbḷī, *f.*, capering, jumping about (mārnī).
huŋghārā *m.*, agreement, saying 'yes' (bharnā).
huŋglaṇā, *v.*, nod sleepily.
hūnjṇā, *v.*, sweep.
hūṇṭe, *m.*, *pl.*, riding on, (laiṇe).
hussarṇā, *v.*, be irritated, worried, be distressed through heat.
huṭṭar, *m.*, excuse, pretence.

I

ī, pronominal suffix, to thee, for thee.

ijjaṛ, *m.*, flock of goats, sheep.
ikārā, *adj.*, single (cloth &c.).
iṭṭī, *f.*, name of small piece of wood to which (1) warp is tied, (2) *kaḷã̄* are tied.

J

jabdē, *adv.*, quickly, recently.
jāc, *f.*, experience, skill.
jāg, *f.*, lymph, fermentation.
jāgō mīṭī, *adj.*, half asleep.
jam jam ! *interj.*, by all means, certainly, welcome.
jāmnũ, *m.*, Eugenia jambolana and its fruit.
jāmnũ, *m.*, iron or brass binder binding *naṛī* to *ḍaṭṭā*.
jandrī *f.*, vessel for preparing *sewīã̄*.
japphaḷ, *adj.*, one variety of the game *kauḍḍī*.
jātak, *m.*, boy.
jātkṛī, *f.*, girl.
jatt, *f.*, longish hair (animal).
jawātrā, *m.*, son-in-law.
jē, pronominal suffix, for you, to you.
jhaberā, *m.*, quarrel, noise.
jhāgṇā, *v.*, endure.
jhaī, *f.*, angry appearance (laiṇī)
jhãkī, *f.*, window.
jhaṛapṇā, *v.*, catch.
jhaṭṭe biṇḍe, *adv.* repeatedly.
jhau, jhaw, *adv.* quickly, recently.
jhiggā, *m.*, shirt.
jhiggī, *f.*, boy's shirt.
jhissṇā, *v.*, lose heart = jhissī khāṇī.
jhōḷ, *m.*, mixture of *ghi* and sugar and milk.
jhōpṇā, *v.*, catch (ball, &c).
jhulānnī, *f.*, little room where Muhammadans cook food.
jhusmusṛā, *m.*, morning twilight.
jī āĕã̄ nũ ! welcome.
jī saddke, welcome.
jīndar, *f.*, mud and dirt at bottom of well.
jist, *m.*, lead.
jōtrā, *m.*, string attaching parts of loom.
juman, *m.*, power, strength.

K

kābula, *m.*, iron bolt.
kāgānī, *m.*, goat with very long hair.
kāhḍ, *f.*, one of the pieces of wood in lower part of *carkhā*.
kaḥl, *f.*, haste, hurry.
kaĩh, *f.*, bell metal.
kaiṛ *f.*, sound, sign which one intently watches for (laiṇī).
kākōrauḷā', *m.*, noise (pāṇā).
kaḷ, *f.*, string attaching warp to ceiling.
kalaṇ, *f.*, praise (by mirāsī).
kalerna, *m.*, kunernā, *m.*, rope attaching *panjaḷī* to *tīr*.
kaliŋgā, *adj.*, blackish.
kalpā, *m.*, long hook for pulling down branches.
kammī, *m.*, one who performs regular menial services.
kāṇ, *m.* = karū = 5 feet.
kaṇ., *m.*, grain borrowed and payable with interest.
kaṇ, *m.*, excellence or sweetness in *guṛ*.
kaṇ maṇ, *f.*, slight rain (hoṇī).
kandūrī, *f.*, small cloth for bread.
kandḷā, *m.*, rounded iron rod.
kaŋgī, *f.*, part of weaving machine for tightening warp.
kaŋgī, *f.*, part of chest (body).
kaṇī, *f.*, half-formed butter in milk (ājāṇī).
kāṇī muṇī, *f.*, slight rain.
kann, *m.*, roughness on neck of cattle (due to yoke).

kānnā, *m.*, reed in weaver's warp.
kānnī, *f.*, reed in warp (different from *kānnā*).
kāṇõ. *f.*, warping unnevenness in framework of bed (paĩṇī).
kāppā, *m.* = kalpā.
kaṛāh, *m.*, big iron vessel with handles.
kaṛāhī, *f.*, smaller *kaṛāh*.
karnaiḷ, *f.*, side piece of *kaŋgī* (loom).
karū, *m.*, measure of length = [5½ feet.
kauḍḍī *f.*, breast bone.
kauḍḍī, *f.*, a game = *kabaḍḍī*.
kerī, *f.*, very small pieces of charcoal.
kesarnā, be angry, displeased.
khabbaṛ, *m.*, khabbṛī., *f.*, rope of stalks of *bajra*, &c.
khabīṛā, wooden instrument of shoemaker.
khachōpaṛ, *m.*, turtle.
khāḍḍā, *m.*, irregular ditch.
khāḍḍī, *f.*, hole in ground beside potter's oven.
khaggā, *m.*, wasp's nest.
khaiḷ, *f.*, row, line, *e.g.* of cabbages.
khākh, *f.*, corner of mouth.
khakkhar, *f.*, lump of *guṛ* and popcorn.
khaḷ, *f.*, remains after extracting oil.
khalārnā, *v.*, cause to stand.
khalihārnā, *m.*, wood attached to ceiling (loom).
khambaṛ, *m.*, main wheel of *carkhā*.
khāṇḍ, *f.*, mine, hole for digging *kankar*.
khann, *m.*, fragment of *ḍhenḍhḷā* (karnā).
khāõpiyyā, *m.*, time of evening meal.
khappā, *m.*, space.
khārā, *adj.*, salt, bitter.
kharak, *f.*, cross piece of wood supporting warp.
kharkannā, *adj.*, big-eared, attentive.
kharkaṇā, *m.*, broom of twigs.
kharkillī, *f.*, peg holding up *kharak* (loom).
kharwā, *adj.*, rough.
khasrā, *m.*, measles.
khaṭak, *f.*, treating as important, valuable.
khicc, *f.*, rope attached to foot piece in loom. [&c.
khīŋgar, *m.*, piece of *kankar*,
khitti, *f.*, *pl.* Pleiades.
khobṇā, *v.*, cause to sink or pierce.
khocḷā, *adj.*, large, loose.
khokh, *m.*, hollow.
khoḷā, *m.*, old dismantled, broken-down house.
khṛappē, *m.*, *pl.*, unevennesses in road.
khṛoc, *m.*, unevenness in road.
khunnā, *m.*, part of face above eye.
khuṇḍ, *m.*, large-hooked stick, side of welṇa.
khuṇḍī, *f.*, small-hooked stick.
khurnā, *v.*, crumble.
khushkā, *m.*, dry *āṭā* added to *rōṭī*, = *palethaṇ*.
khuṭṭar, *m.*, deceit (karnā).
kīkaṇã, kīkarã, *adv.*, how.
kiṛṇā, be angry with.
kirtghaṇ, *adj.*, ungrateful, unthankful.
kirtghaṇī, *n.*, ingratitude, unthankfulness.
kojhā, *adj.*, ugly, ill-suited, defective (in member).
kōkkā, *m.*, cowry.
kōkkā, *m.*, mouthful of sugarcane.
kraihd, kraiht, *f.*, loathing.
kuāṛī, *m.*, man who sells old furniture.
kubbā, *m.*, cross piece of wood in *ḍhoḷ*.
kucajj, foolishness.

kuḍḍhaṇ, *m.*, wooden poker.
kuḍhō, *m.*, hindrance (laggṇā).
kuhātṛā, *m.*, half kos.
kuhmuk, *f.*, crowd.
kūkkā, *f.*, whispering, plotting.
kukkaṛ uḍārī, *f.* (cock-flight), very short distance.
kukkrē, *m. pl.*, granulation of eyelids (paiṇe).
kuṇḍaḷ, *f.*, coil of snake (marnī).
kuṛh, *f.*, cow house.
kuṛkuṛ, *f.*, chattering.
kurmāṇā, *v.*, wither.
kuśhāla, *m.*, attention, effort.
kutarnā, *v.*, cut up small.
kuweḷ, *f.*, lateness.
kuweḷā, *adj.*, late.

L

labhat. *f.*, profit.
lāg, *m.*, expense.
lāgā dāgā, *m.*, connection, business.
lāhmbe, *adv.*, to one side.
lāī, *f.*, one day's harvesting.
lalāran, *f.*, joy.
lālli, *f.*, maina (bird).
lamerā, *adj.*, longish.
lamittaṇ, *f.*, length.
lamkṇā, *v.*, desire, covet.
lā̃, *f.*, pulley-rope in loom.
laṉjāṇā *v.*, walk lame.
laṭṭh, *f.*, axle of khambaṛ in carkhā.
lāṭū, *m.*, handle of door.
lauṇ, *m.*, meat.
laus, laũs, *f.*, weal from blow.
lī, *f.*, line, track.
lickṇā, *v.*, bend, (*intr.*)
likhat, *f.*, bill of divorce.
līllā̃, *f. pl.* (luṭṭṇiā̃), amuse oneself.
limbh, *f.*, lock of hair.
līṭ, *f.*, lock of hair.
liṭṭ, *f.*, faqir's lock of hair.
lohṛā, *m.*, half of rope *baraṛ*.
lūmbā, *m.*, chimney.
luṇḍā, *adj.*, tailless, with hairless tail.
lūṛā. ?
lūsṇā, *v.*, burn with anger.

M

mackāṇa, *m.*, incite.
madāsā, *m.*, cloth tied round head to keep off cold.
madé, *m.*, one who will not give.
maḥl, *m.*, brickwork round inside of well.
māhngā, *m.*, clapping of hands (mārnā).
mājhā, *adj*, pertaining to buffalo.
makhe, *v.*, I said, contrd. from *maĩ ākhĕā*.
mākhyõ, *f.*, honey, honey-comb.
makkū, *m.*, (1) cloth binding *naṛī* to *ḍaṭṭā*, iron point of *nāhḷ; makkū ṭhappṇā*, fig. sit upon some body. (2) steel point to weaver's shuttle.
makṛā, *m.*, forked wood in *kānjaṇ* holding *tīr*.
makṛī, *f.*, locust, spider.
mal, *m.*, word of address to a man or boy, voc. *malā*.
maḷ, *f.*, earth deposit from river.
maḷĕā hočā, *adj.*, ill.
maḷĕā jāṇā, become ill.
maḷhī, *f.*, dirt in well or on ox-walk.
maḷōmaḷī, maḷīō maḷi, *adv.*, by force.
maḷṇā, *v.*, escape, get away.
māḷṭā, *m.*, Malta orange.
maṇ, *f.*, raised brickwork round well.
mandhārnā, *v.*, crush.
maṇḍhīla, *m.*, piece of wood in *bharwannī*.
mandhra, *adj.*, short in stature.

māngat, *m.*, beggar.
maṇkā, *m.*, circular bit of bone in *tarakḷā* of *carkhā*.
masātar, *f.*, height from ground to tips of fingers of hand held above head.
massī, *f.*, sock, especially leather sock.
matē, *conj.*, lest.
maṭṭaṇ, *f.*, large earthen jar, = maṭṭ.
matthā, *m.*, forehead.
maurī, *f.*, back over scapula.
māyā, *f.*, starch.
mec, *m.*, table.
mentar, *f.*, measuring.
mindhṇā, *v.*, crush.
mogha, *m.*, small canal, channel.
mohṛā, *m.*, long dry branch with twigs.
mohrak, *f.*, rope on head and mouth of cattle.
mohrī, *f.*, small dry branch with twigs.
mohrlā, *adj.*, in front.
muhāl, *f.*, small piece of wood in cart-wheel.
muhānjḷā, *m.*, morning twilight.
muhāṭh, *f.*, side post of door.
muhattaḷ, period of time, appointed period.
mūhrā, *m.*, piece of wood between two long side pieces of cart.
mukāḷā, *m.*, bad name, evil report.
mūḷī kaṇḍā, *m.*, iron grater for radishes, carrots, &c.
muŋgaraṛā, *m.*, mixture of grain, *muŋgī* and *mãh* or *cholle*.
munnā, *adj.*, three quarters.
munnā, *m.*, upright stick in cart to keep in load.
muṛ, *adv.*, again.

N

nadī, *f.*, Nūh nadī, Noachian flood.
nāhb, *f.*, ellipsoidal wood round *dhurā* of cart.
nainhdar, *f.*, wood on which *laṭṭh* of well rests.
nakhākhrā, *adj.*, pure, unmixed, good.
namīnā, *adj.*, blind.
nāŋgan, *adj.*, naked.
nanierā, *m.*, huqqa with cocoanut base.
napṇa, *v.*, seize.
naparṇa, *v.*, seize.
naṭṭi, *f.*, centre of game with cowries; naṭṭī bahāṇā, keep waiting.
ne, *v.*, they are.
ne, ṇe, pronominal suffix: to, for or by them.
nehṇā, *v.*, cause to stand on ground *e.g. maṭṭ, ghaṛā*.
neṛe, *interj.*, said to right ox to make him turn to left.
nhernī, *f.*, vertigo.
nhora, *m.*, = hanorā.
nī̃., ṇī̃., pronominal suffix, are to or for thee.
nikheṛṇa, *v.*, separate.
nikkaṛ, *m.*, piece of anything, = *pikkā*.
nikkharṇa, *v.*, be separated.
ninghā, *adj.*, warm.

P

pabbī, *f.*, hill.
paḍāṇā, paḍhāṇā, *m.*, oxwalk at well.
paihṛā, *m.*, way.
pāhrēā, *m.*, cry of distress (pāṇā).
paṛōppī, *f.*, vertical cylinder in millstone of *khrās*.
pashū, *m.*, buffalo.
pāssā, *m.*, pure gold (pāsse dā seonā).

pāttū, *m.*, one handful of cattle excrement.
paī, *conj.*, that.
pailā, *adj.*, further, beyond.
paintṛā, *m.*, dry place for placing feet in wet ground.
pair pair! said to right ox to make him turn to left.
pasār, *m.*, piece of wood below *racch* in weaving.
pasār, *m.*, front-room.
pasār, *m.*, piece of wood under warp in loom.
paṭā, *m.*, document, lease.
paṭṭhā, *m.*, pupil of wrestler.
pattha, *m.*, wood into which *cūthī* of *latth* in well comes.
patṭhe, *m. pl.*, green chopped food for cattle.
paṭṭnā, *v.*, spend, waste (money).
paund paṭṭ = paund saṭṭe.
paund saṭṭe, *adv.*, at first go off, at once.
pauṛī, *f.*, foot piece in loom.
pauṛī, *f.*, long side beam in cart.
peṭhā, *m.*, kind of vegetable-marrow.
phaĩh, *adv.*, violently (of beating or throwing down).
phalṛī, *f.*, wood on which potter sits.
phalṛi, *f.*, wooden tool of shoemaker.
phaṇḍ, *f.*, beating, gust of rain.
phaṇḍākā, *m.*, shaking dust out of cloth (mārnā).
phāṇgā, *m.*, trouble, loss (laggṇā).
pharhī, *f.*, regular mass of sleepers, bricks, *kankar*.
phaṭṭ, *f.*, lower piece of wood in *panjāṛī*.
phēṇā, *v.*, squeeze, burst.
phiḍḍā, *m.*, little hollow, hole, depression.
phōs, *m.*, collection of cattle ordure after one evacuation.
phūk, *f.*, air, blowing with mouth or inflator.
phull, *m.*, popcorn, black spot in *capātī*.
phuṭṭnā, *v.*, have offspring (woman).
phutūī, *f.*, waistcoat.
piāka!, *m.*, great smoker or drinker.
pichāṛī, *f.*, rope attached to *pauṛi* of loom.
pīcṇā, *v.*, absorb water, be watered (especially land).
pīṇg, *f.*, guḍḍī gudde dī p., rainbow.
piñj, *f.*, spoked wheel, little wheel at end of *gāhd* in iron *welṇā*.
pinnī, *f.*, leg between thigh and ankle.
pipṇī, *f.*, eyelash, upper or lower.
pīṛhī, *f.*, generation.
pitta, *m.*, pure *kaĩh* (bell metal).
pōṭ, crop of bird.
pukkarnā, *v.*, give.
pūr, *m.*, *rahu* while being cooked.
pūshal, *f.*, tail.

R

rach, *m.*, part of weaving machine where bobbin passes.
rahṛ, *f.*, unploughed land surrounded by ploughed.
rahtaṛ, *f.*, condition of living.
rail, *f.*, appearance of something visible to eyes.
raṛakṇā, *v.*, go or walk slowly.
rambṇā, *v.* make arrangements for (*e.g.*, marriage).
rapphaṛ, *m.*, noise, quarrel.
raṛā, *adj.*, of uncultivated, level ground.

raṛī, *f.*, uncultivated level ground.
rashm, *f.*, ray of sun or cloth.
raṭṭā, *m.*, noise.
rauṇā, *m.*, buttermilk.
rehl, *f.*, Qurān stand (folding).
reṛ, *m.*, reṛi, *f.*, = areṛ, areṛī.
rhaṇḍā, *m.*, widower.
rōṛ, *m.*, *kankar*, or piece of *kankar*.
rōṛā, *m.*, long continued time without rain.

S

—s, pronominal suffix, by, for or to him = sū.
sāh, *f.*, ashes.
sajhāṇ, *f.*, power of recognition.
sajhāṇṇā, *v.*, recognise.
sak, sakṛa, *m.*, little bits or shavings of wood.
saḷāī, *f.*, needle in shuttle.
salūkā, *m.*, waistcoat.
samaddhar, *adj.*, short in size.
samāwār, *m.*, metal teapot and heating apparatus combined.
samūlṛā, *adj.*, all, the whole of, with everything.
sāṇak, *f.*, *i.q. kunāḷī*, earthen dish.
saṇḍh, *f.*, grown buffalo which has not had young.
sandhōā, *m.*, house-breaking instrument.
saŋgā, *m.*, collection of 4—10 strings on sides of bed or pīṛhi.
saŋgaṛṇā, *v.*, became contracted (as leather).
sānjhā, *adj.*, in common, joint.
sanjhāṇ, *f.*, recognition.
sanjhāṇṇā, *v.*, recognise.
sāṇkī, *f.*, earthen dish, *i.q. kunāḷī*.
sānnhā, *m.*, kind of lizard.
sansār, *m.*, crocodile.
sarājīt, *adj.* well, alive, (after illness).
sarīā, *m.*, iron rod.
satāīā̃, satāīwā̃, *adj.*, twenty-seventh.
satīwā̃, *adj.*, twenty-seventh, especially of day in Ramzān.
satrāṇā, *adj.*, strong.
sawakẖtā, *m.*, early time.
sawakẖtē, *adv.*, in good time.
sawikk, *m.*, evil deed.
sehd, *f.*, direction.
sejjaḷ, *f.*, moisture.
sepī, *m.*, master receiving or servant doing menial service on contract pay.
shām, *f.*, iron or brass band round wood.
sharlāṭā, *m.*, gust of rain or wind.
shokẖ, *adj.*, bright (of light or colour); quick (of hearing).
shokẖā, *adj.*, cheeky, smart.
shū̃ shā̃, *f.*, display, grandeur.
shūkā shākī, *f.*, display, grandeur.
shūmpuṇā, *m.*, miserliness.
sīdh, sīdhī̃, *prep. with fem.*, up to.
sidharna, *v.*, become good, improve.
sihāṇ, *f.*, recognition.
sihāṇṇā, *v.*, recognise.
sijjhṇa, *v.*, pay out, take revenge on.
sillṇā, *v.*, get wet.
sir matthe te, (on head and forehead), by all means, welcome!
sīrī, *m.*, partner.
sitthā, *m.*, wax in honeycomb.
siwāī, *f.*, sewing, price of sewing.
sōhḍā, *adj.*, pinkish red.
sōkkā, *m.*, collection of 4—10 strings along sides of bed or *pīṛhī*.
sū, pronominal suffix, to, for or by him = -s.
suāhrā, *adj.*, straight on.

sucajjā, *adj.*, intelligent.
sudharnā, *v.*, become good, improve.
sudhārnā, *v.*, make good, improve.
sukhall, sukhallā, *adj.*, easy.
sumbā, *m.*, rounded, pointed instrument for making holes.
sūṇā, *v.*, have offspring (animals).
sunhippaṇ, , beauty.
sun mun, *adj.*, quiet.
suraŋ, *f.* tunnel.
suṛaŋ, *f.*, tibia.
sūṭ, *m.*, puff (of huqqa) (lāṇā).
sūṭlaṛ, *m.*, piece of wood in well to keep *māhl* in position.

T

tabākhṛī, *f.*, metal plate, *i.q.* thāḷī.
ṭakāṇā, *m.*, cross piece in floor of cart.
ṭakāṇī, *f.*, =ṭakāṇā.
takbīr wagāṇā, *v.*, kill for food.
takmā, *m.*, medal.
ṭākrā, *m.*, meeting.
talĕāṭh, tarĕāṭh, *m.*, wood at top of well beside *parāṇā*.
tāḷū, oblong pieces shaved on top of head, palate.
talwaṭṭh, ,, part of *kaŋgī* in loom.
tandūḷī, *f.*, one of strands in *laṛ*.
ṭaŋgṇā, *m.*, hanging frame for clothes.
ṭap, *m.*, dry thorn-branch.
ṭapḷa, *m.*, confusion, mistake, (laggṇā).
ṭappā, *m.*, hole in ground made by blow from spade.
tāṛ, *f.*, haste, anxiety.
tar, *f.*, ray of sun.
taraŋgaṛ, *m.*, Orion's Belt.
taraŋgaṛṇā, *v.*, do in a rough and ready way.
tarauṇā, *m.*, little reedstand for sweetmeat seller's basket.
tarcauḷi, *f.*, rice and sugar (*shakkar*) and *tiḷ*.
tarnā, *v.*, be paid (of money).
tārnā, *v.* pay (money).
ṭas, *f.*, adornment (kaḍḍhṇa).
taśbī, *f.*, Muhammadan rosary.
tatatat, *interj.*, to make left bullock turn to right.
ṭaṭauḷī, *f.*, kind of bird.
taullī, *f.*, earthen cooking pot =tauṛī.
tāzī, *adj.*, tāzī kutta, greyhound, tāzīghoṛā, racehorse.
ṭekṇā, *v.*, bow.
ṭhāh, *m.*, *f.*, sharp noise= paṭākā.
ṭhakkā, *m.*, cold wind.
thaṇ, *m.*, woman's breast.
ṭhapṇā, *v.*, fold.
ṭhār, *m.*, cold.
ṭhār, *f.*, acquaintance, resting place.
thaṛā, *m.*, raised brickwork before house or on well.
ṭhaṭṭh, *f.*, wave.
thēr, *f.*, cowry with piece out of back, =citt.
ṭhet, *m.*, sense, intelligence.
ṭhuḷṇā, *v.*, make known.
ṭhumṇa, *v.*, lean against.
ṭibbā, *m.*, hillock.
ṭikkī, *f.*, ball of sun just before setting or after rising: hard lumpy bit in *capātī*.
ṭil, *m.*, force.
tilakṇā, *v.*, slip.
tillaṛ, *m.*, rope of three strands.
ṭiṇḍ, *f.*, camel's stomach brought into mouth, bald head, shaved head.
tīr, *m.*, vertical beam, axle of *dhoḷ*.
tissā, trissā, *m.*, three kinds of grain mixed.
ṭōḍḍā, *m.*, young of camel.
ṭōhṇā, *v.*, feel (to).

ṭōppā, *m.*, circular piece of wood joining two parts of *khambaṛ*.
ṭōṭṭā, *m.*, piece, fragment.
traihṇā, *v.*, be startled.
trāhṇā, *v.*, startle.
trappaṛ, *m.*, sackcloth.
trappṛī, *f.*, small piece of sackcloth.
trauh, *m.*, alarm.
threhrā, *adj.*, threefold.
treḷīōtreḷī, *adj.*, covered with perspiration.
treōṛ, *m.*, milk and ghi and sugar mixed.
trikkh, *f.*, swiftness.
trōppā, *m.*, stitch.
tukk, *f.*, guess.
tuḷ, *f.*, lever, lāṇī = apply lever.
tuö, *interj.*, calling to dog.

U

ŭ, pronominal suffix, for thee, to thee, thee.
uccā, *m.*, tongs.
ucecā, *adj.*, especially.
uḍāīā̃, *f. pl.*, winnowing.
udhāḷā, *m.*, elopement.
uggharnā, *v.*, raise (stick).
ukkā, *adj.*, altogether.
ulār, ulāra, *m.*, tilting over or back.
ulārnā, *v.*, raise (stick).
ulhārā, *m.*, bending trees in wind (khāṇā).
ukhkhaṇṇā, *v.*, with mātā (*f.*) vaccinate.
ukhkhaṇwāṇā, *v.*, with mātā (*f.*) get vaccinated.
ullarnā, *v.*, get tilted to one side.
unj, *adv.*, in this way, any how, &c.
ureb, *m.*, bending, slanting.
utāṇā, *adj.*, lying on back.

W

wā, *m.*, association, connection.
wā warōḷā, *m.*, wā warōḷī, *f.*, whirlwind with dust.
wacherā, *m.*, foal.
wāḍhīā̃, *f. pl.*, cutting harvest.
wagghī, *f.*, part between fingers and between toes.
wahṇā, *adj.*, smart, clever, intelligent.
wāhṇā, *adj.*, barefoot, pairā̃ tõ wāhṇā.
wahṇī, *f.*, small drain.
wahṛ tārā, *m.*, Venus, Morning Star.
wāhṛī, *f.*, earthen vessel like teapot.
waihtar, *m.*, ass, mule, &c.
waiṇ, *m.*, mourning (gen. plural).
wajjṇā, *v.*, be struck or sounded, be shut (door).
wal, *prep.*, with *masc.* towards, with *fem.*, towards one's wife.
waḷ (nikaḷṇā), muscle get out of place, causing pain.
waḷā, *m.*, turn, twist.
walaŋgḷa, walāŋgḷa, *m.*, turn, twist.
walaŋgḷī, walāŋgḷī, *f.*, turn, twist.
walh, *f.*, rope attaching *panjāḷī* to *gāhdī*).
walūndarnā, *v.*, spoil.
wānd, *f.*, fine weather.
wāndhā, *adj.*, free, disengaged.
waŋ, *f.*, one of pieces of wood composing *baiṛ*.
warāŋgḷā, *m.*, turn, twist.
wasāṛ, *m.*, spice, *e.g.*, haldī.
wāskaṭ, *m.*, waistcoat.
wasṇā, *v.*, rain.
waṭṭā, *m.*, lobe of ear.
waṭṭā, *m.*, stone pestle.
waṭṭṇā, *m.*, stick for twisting rope.
waṭṭī, *f.*, weight of two sers.
waule, *adv.*, in the open air.
wehl, *f.* and *m.*, leisure.

wehlā, *adj.*, at leisure.
whalā, *adv.*, then, in that case.
widdh, *f.*, boil in vagina.
widḍī, *f.*, troublesome profitless work.
widḍṇā, arrange (marriage), prepare (huqqa), spread out to dry (saṇ).
will, *f.*, moisture.
willṇā, *v.*, get moist.
wircṇā, *v.*, be quiet (of child).

Y

yabb, *f.* (*gen. pl.*), silly talk (mārnā).
yaddhṇā, *v.*, copulate with (abuse), *i.q.* jaddhṇā.
yōrōyōrī, *adv.*, by force.
yūsaf khūh, what the dove says (*lit.* 'Joseph in the well,' referring to doves having told where Joseph's brethren had put him).

DECEMBER, 1909.

The Monthly General Meeting of the Society was held on Wednesday, the 1st December, 1909, at 9-15 P.M.

DR. E. D. ROSS, PH.D., in the chair.

The following members were present:—

Dr. N. Annandale, Mr. R. C. Bannerji, Mr. P. Brown, Prof. P. J. Brühl, Babu Monmohan Chakravarti, Mr. B. L. Chaudhuri, Mr. D. Hooper, Mr. T. H. D. LaTouche, Lieut.-Colonel F. P. Maynard, I.M.S., Lieut.-Colonel D. C. Phillott, Mr. E. Vredenburg, Rev. A. W. Young.

Visitors:—Mons. F. de Basaldur, Mr. J. E. Woolacott.

The minutes of the last meeting were read and confirmed.

Fifty-four presentations were announced.

The Chairman announced:—

1. That the Council has appointed Dr. N. Annandale to officiate as General Secretary in the place of Mr. G. H. Tipper, gone on tour.

2. That Mr. D. Hooper has resumed charge of the duties of Treasurer from the Hon'ble Mr. Justice Asutosh Mukhopadhyaya.

3. That Lieut.-Colonel D. C. Phillott has been appointed a Member of the Council.

The General Secretary reported that Mr. H. M. Lefroy, Sir H. H. Risley and Sir James Wilson have expressed a wish to withdraw from the Society.

The following is the obituary notice of DR. T. BLOCH, PH.D., which was read at the November meeting:—

Ernst Theodor Bloch was born on the 8th May, 1867, at Christiansfeldt in the Duchy of Schleswig Holstein. His father, Bernhard Bloch, was the owner of a tannery and belonged to a colony of gentlemen farmers who had migrated from Denmark. In 1880 he was placed in an ecclesiastical seminary, in which he passed his school examinations and distinguished himself by winning numerous prizes in various subjects. In 1887 he entered the Upper Primary Latin High School in Halle-am-Siene. His University studies were chiefly carried on at Leipzig, where he resided from Easter

1889 to 1890. Subsequently he went to Berlin to study classical and Indo-Germanic Philology. He studied Sanskrit under Windisch; Comparative Philology under Brugmann; Modern Persian, Turkish and the Semitic languages, especially Arabic, Hebrew and Syriac under Socin; Zend, Pahlavi and Religious History under Lindner. He also attended the lectures of Weber, Oldenberg and Johann Schmidt. In 1893 he graduated at the University of Leipzig as Doctor of Philosophy "*cum summa laude.*" His thesis for the doctorate was the well-known monograph on the Prakṛt Grammarians entitled "Vararuci und Hemacandra." About this time he made the acquaintance of Hofrath Dr. Georg Bühler who, struck with the young man's singular attainments, invited him over to Vienna. At Vienna he spent two years in the study of *Smriti*, and it was Bühler's influence that made him an ardent student of ancient Indian History, Palæography and Epigraphy—subjects which, as he himself used to tell his friends, brought him fame in after-life. In 1895 his first epigraphical contribution appeared in the *Journal of the Royal Asiatic Society* under the title "An unpublished Valabhi Copperplate Inscription of King Dhruva Sena I." In the following year he published at Leipzig his esssay on the "Dharmasutras and Gṛhyasutras of the Vaikhanasa," and was soon after appointed First Assistant to the Superintendent of the Indian Museum, Calcutta. On the 3rd February, 1897, he was elected a member of the Asiatic Society of Bengal, and a month later, Honorary Philological Secretary, *vice* Dr. G. A. Grierson, resigned. He continued to be the Philological Secretary till 1904. In those days there were few coin committees, and numismatics formed no light part of the Philological Secretary's work. In the decipherment of Tughrā and Kūfi, Dr. Bloch's skill was unrivalled, and he could read fluently, speak and understand Hindi, Urdu, Bengali, Uriya, Kashmiri and Marathi. Of the modern European languages he knew English, German, Danish, Dutch, Swedish, Italian, French, Spanish, Roumanian and Portuguese. He had read a great deal of classical Armenian and Arabic (both Prose and Poetry) and enjoyed perusing newspapers and periodicals in modern Arabic, Persian and Turkish. No less an authority than the late Prof. Pischel used to say that there were very few scholars alive who could surpass Dr. Bloch in his knowledge of the Sanskrit and the mediæval languages of India. Prof. Pischel also said that since the death of Prof. Kielhorn, Dr. Bloch was the greatest living authority on Indian inscriptions. In 1898 Dr. Bloch's essay on an inscribed Buddhistic statue from Sravasti appeared in our Society's *Journal*. It is perhaps the only extant authoritative treatment of Indian Palæography of the Kusāna period. Appointed Archæological Surveyor, Bengal Circle, in 1900, he explored with

great energy and much success some of the most ancient sites within his province, such as those of Vaisali, Rajagṛha and Buddha-Gaya. At Vaisali he discovered a considerable number of ancient Indian seals, and in his article on the "Excavation of Vaisali" he gave an account of them. Falling dangerously ill in 1906, he took leave for about two years, most of which he spent in Italy. Shortly before he left India he was nominated Fellow of the Calcutta University, in which position he took active part in discussions connected with Sanskrit, Hebrew, and Ancient Indian History. He rejoined service early in 1908, but his health was completely shattered. Towards the end of that year there were signs of improvement, but in June last he suddenly fell ill. His doctors advised him to go to the hills and take complete rest, but, engrossed as he was with the preparation of his lectures on Ancient Indian History, he preferred to remain in Calcutta where the necessary books of reference were accessible to him. His health continued to deteriorate till a sudden failure of heart carried him off on Wednesday, the 20th October, 1909. In accordance with a wish which he frequently expressed in his lifetime, his remains were cremated at the Entally Crematorium, without any rites.

"Tu quidem, ut es leto sopitus, sic eris, aevi
Quod super est, cunctis privatus doloribus aegris:
At nos horrifico cinefactum te prope busto
Insatiabiliter deflevimus; aeternumque
Nulla dies nobis mœrorem e pectore demet."

A list of the published contributions of Dr. Bloch is herewith subjoined:—

1. A Grant of Dhruvasena I. J.R.A.S., 1895, p. 379.

2. Buddha worshipped by Indra. Proc. A.S.B., 1898, p. 186.

3. An ancient Inscribed Buddhistic Statue from Sravasti. J.A.S.B., pt. I, 1898, p. 274.

4. A new Inscription of Maharaja Bhoja I. *Ib.*, p. 291.

5. Note on the date of an Ancient Palm-leaf Manuscript from Nepal. Proc. A.S.B., 1899, p. 69.

6. An Inscribed Drum from Assam. *Ib.*, p. 68.

7. An Edition of a New Copper-plate Inscription of Jayadityadeva II. J.A.S.B., pt. I, 1900, p. 88.

8. Three new Inscriptions from Gaya. Proc. A.S.B., 1902, p. 66.

9. Basar-Vesali. Z.D.M.G., Bd. LVII, p. 206.

10. Ein griechische Theater in Indien. *Ib.*, p. 455.

11. Excavations at Lauriya. *Ib.*, LX, p. 227.

12. Einfluss der altbuddhistischen Kunst auf die Buddha-Legende. *Ib.*, Bd. LXII, p. 370.

13. Uber einge bildliche Darstellungen altindischer Gottheiten. *Ib.*, p. 648.

14. Die Zeit Kalidasas. *Ib.*, p. 671.

15. The Modern Name of Nalanda. J.R.A.S., 1909, p. 440.

16. Excavations at Basar. Archæological Annual, 1903-04, p. 81.

17. Caves and Inscriptions in Ramgarh Hills. *Ib.*, p. 123.

18. Eine Sammlung persischer und arabischer Handschriften in Indien. Z.D.M.G., Bd. LXIII, p. 98.

19. Zur Asoka-Inschrift von Bairat. *Ib.*, p. 325.

20. Sahet Mahet Umbrella-staff Inscription. Ep. Ind., Vol. IX, p. 290.

21. Über einige altindische Götternamen. Wörter und Sachen. Bd. I, 1909, p. 80.

22. Two inscriptions on Buddhist Images. Ep. Ind., Vol. VIII.

The following papers will appear as his posthumous publications:—

1. Note on an Inscription of Alauddin Husain Shāh, of Bengal. J.A.S.B.

2. A note on Zoroastrian Deities on Kusāna Coinage. Z.D.M.G.

3. Notes on Buddha Gaya. Archæological Annual.

4. The Amauna plate Nandana. Ep. Ind.

5. Inscriptions on the Gateway of the great Mosque at Burhanpur. Ep. Ind. Mos.

6 The Hathi Gumpa Inscription of Kharavela.

In addition to these, the supplementary catalogue of the Archæological Section of the Indian Museum rewritten by Dr. Bloch will be published by the Trustees. But by far the greatest loss to scholarship has been the non-completion of his intended lectures on Ancient Indian History which he purposed to deliver in the course of November and December, as Reader in that subject to the University of Calcutta—an office to which he had been appointed as a slight token of recognition of his vast erudition and indefatigable researches.

Linguists, philologists and archæologists, eminent in their own particular line, there have been in every age and in every clime, but the unique combination of such varied and

profound learning as distinguished Dr. Bloch from the rest of his compeers, is rare even in a century.

The following three gentlemen were ballotted for as Ordinary Members :—

Mr. J. E. Webster, I.C.S., proposed by Mr. W. B. Brown, seconded by Mr. H. G. Graves ; *Babu Panchanan Ghose*, M.A., Officiating Prof. of Physics, Krishnagar College, proposed by Dr. E. P. Harrison, seconded by Mr. G. H. Tipper ; *Mr. Eugene Toth*, proposed by Mr. G. H. Tipper, seconded by Dr. N. Annandale.

The following papers were read :—

1. *Rivers of Bengal.—By* W. A. Inglis. *Communicated by the General Secretary.*

This paper has been published in the *Journal* for November, 1909.

2. *The Bahmani Dynasty.—By* Maulvi Abdul Wali.

3. *Pre-Mughal Mosques of Bengal.—By* Monmohan Chakravarti.

This paper has been published in the *Journal* for October, 1909.

4. *The Secretion of Phromnia marginella*, Olivier.—*By* D. Hooper.

This paper has been published in the *Journal* for October, 1909.

5. *The Poems of Bairam Khan, Khan-Khanan.—By* Dr. E. D. Ross.

The Poems will be published in the Bibliotheca Indica.

The Adjourned Meeting of the Medical Section of the Society was held at the Society's rooms on Wednesday, the 8th December, 1909, at 9-30 P.M.

Lieut.-Colonel F. J. Drury, I.M.S., in the chair.

The following members were present :—

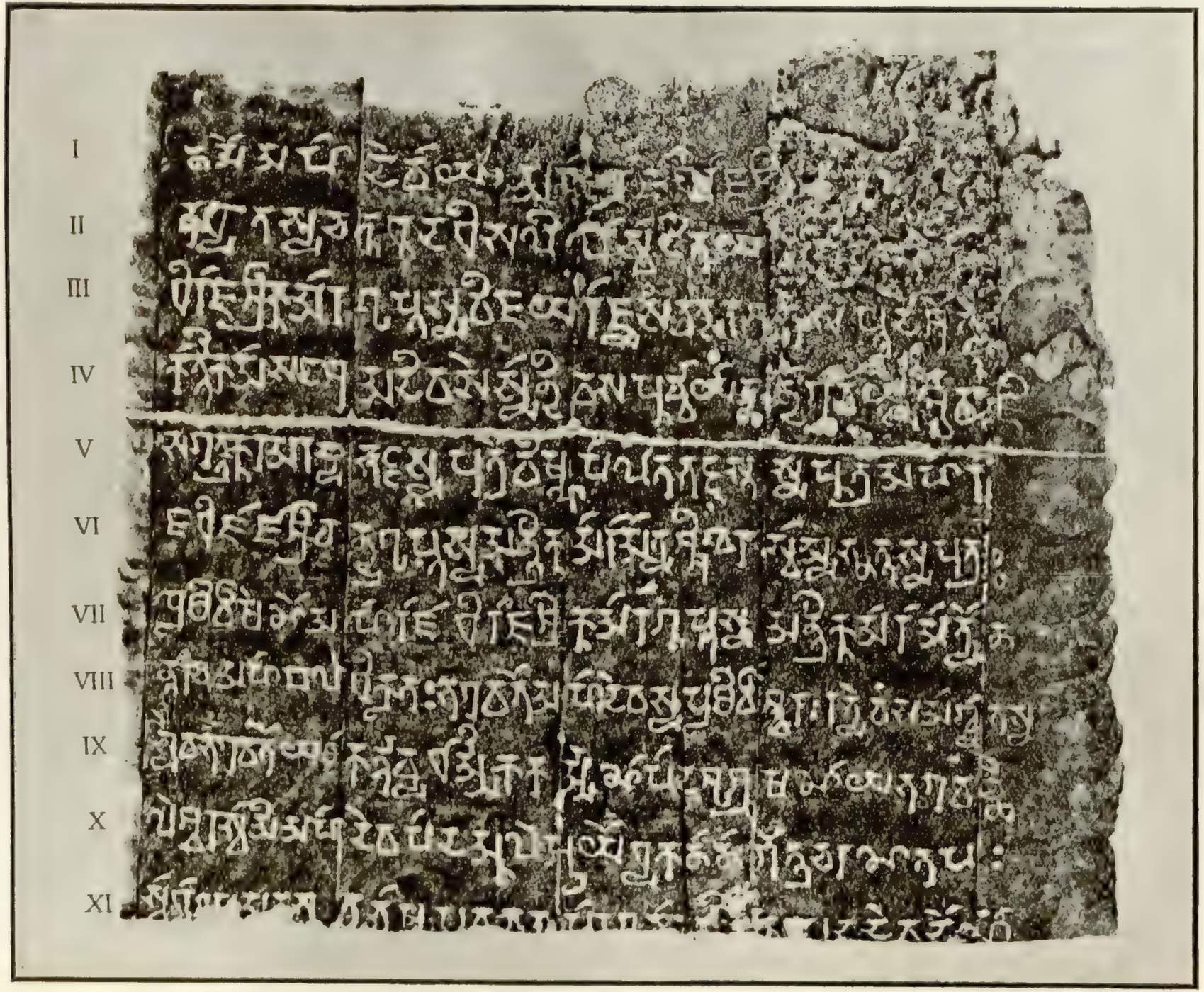
Dr. U. N. Brahmachari, Dr. Adrian Caddy, Major J. T. Calvert, I.M.S., Dr. G. C. Chatterjee, Captain F. P. Connor, I.M.S., Captain R. E. Lloyd, I.M.S., Lt.-Col. F. P. Maynard, I.M.S., Captain D. McCay, I.M.S., Captain J. W. D. Megaw, I.M.S., Captain H. E. Smith, I.M.S., Captain H. B. Steen, I.M.S., Major L. Rogers, I.M.S., *Honorary Secretary.*

Visitors :—Mr. C. N. Davis, Babu B. D. Mukerjee.

The minutes of the last meeting were read and confirmed.

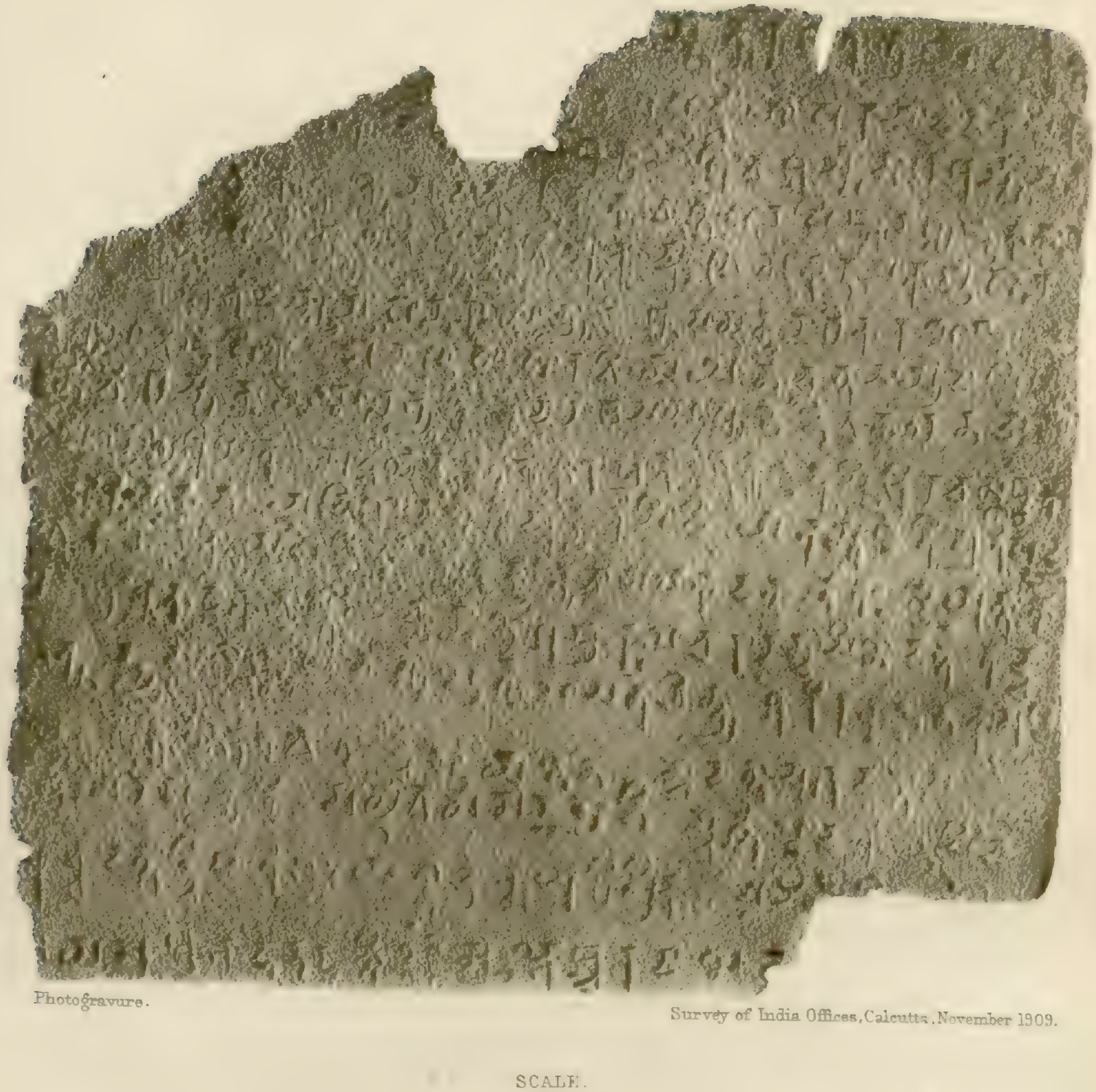
A case of Kaposi's disease was shown by Col. Calvert, one of congenital heart disease by Dr. Caddy, and one of *caput medusa* by Dr. U. N. Brahmachari.

A discussion on "Circulatory Diseases in India" was opened by Lieut.-Col. F. J. Drury, I.M.S., and a paper on the same subject was read by Major L. Rogers, I.M.S., and the discussion was adjourned until the next meeting.



Engraved & printed by Survey of India Offices, Calcutta, 1909.

Bharadi Dih Inscription of Kumara Gupta I. The year 117.



Photogravure.

Survey of India Offices, Calcutta, November 1909.

SCALE.
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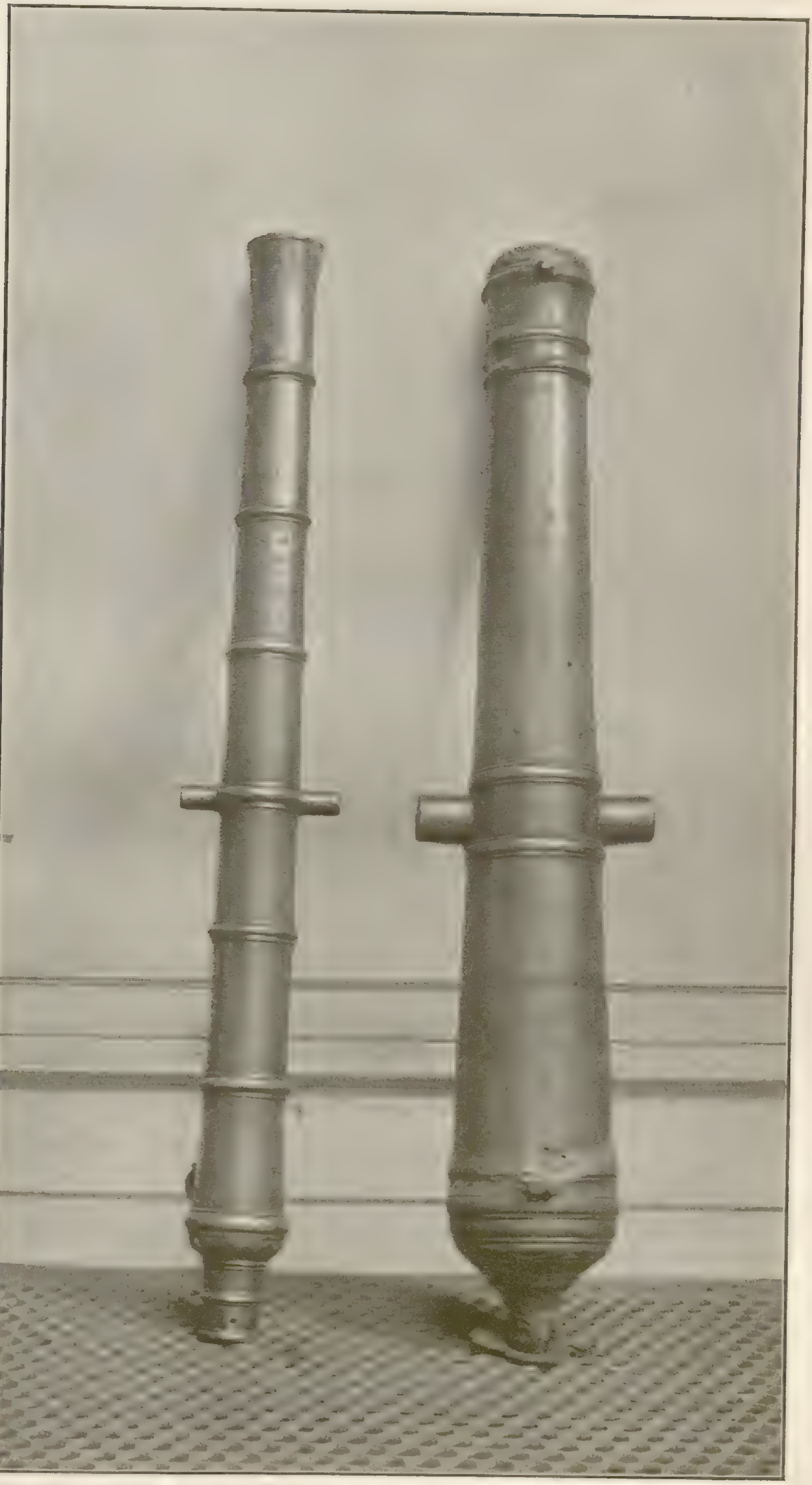
DHANAIDAHA GRANT OF KUMĀRAGUPTA I.

The year 113.



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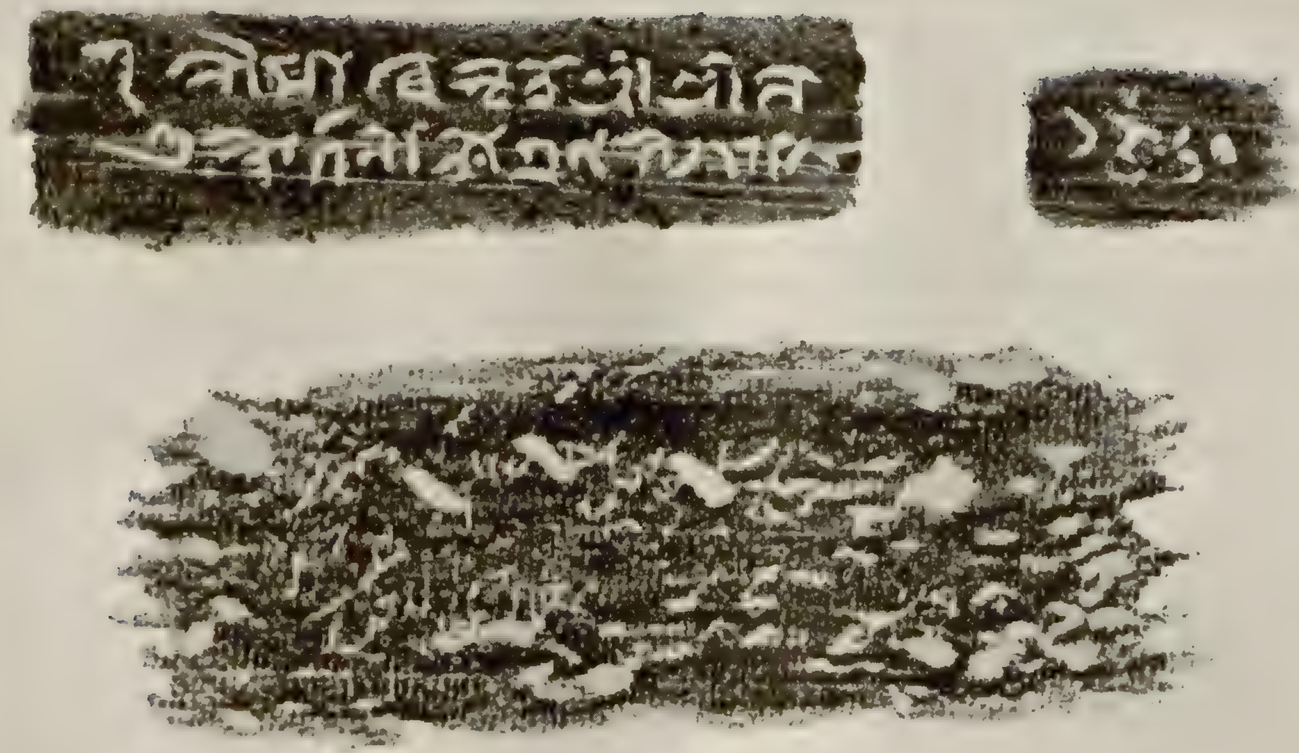
TWO INSCRIBED GUNS FROM ASSAM.



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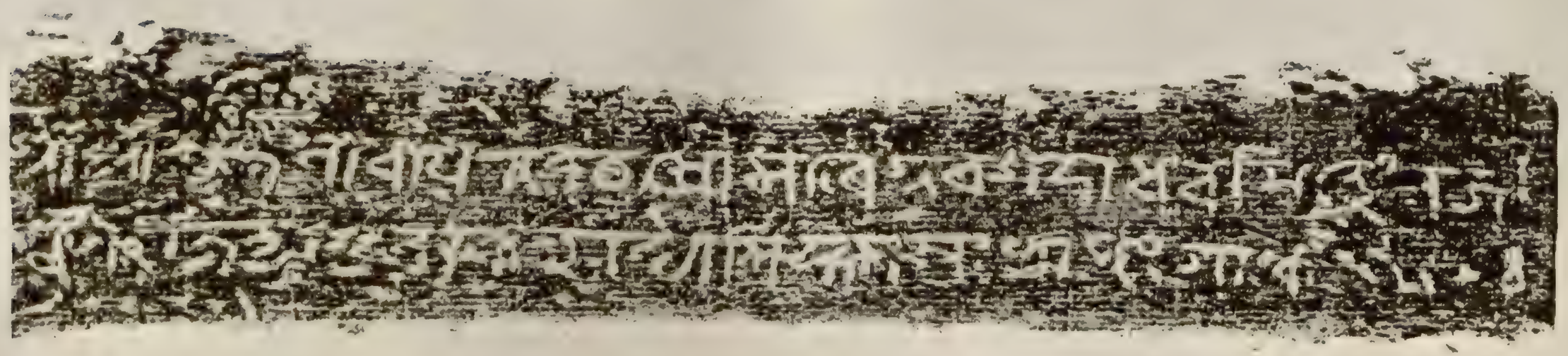
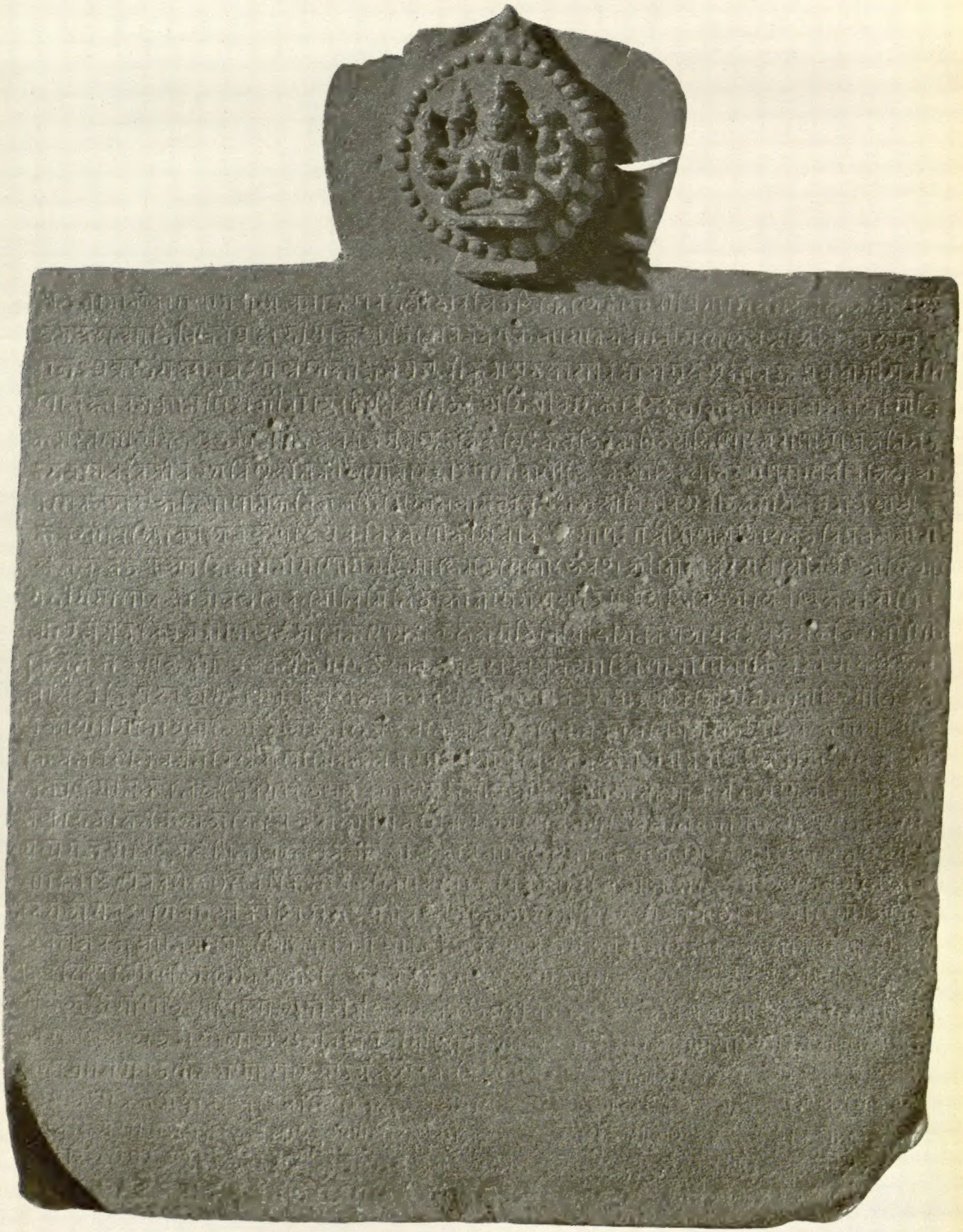


INSCRIPTION ON THE LARGER GUN.

Photo-litho'd at the Survey of India Offices, Calcutta, 1910.



Half-tone, Survey of India Offices, Calcutta, 1909.

The Mādhāinagar grant.—Obverse.

Half-tone. Survey of India Offices, Calcutta. 1909.

The Mādhāinagar grant.—Reverse.

PRINCIPAL PUBLICATIONS OF THE SOCIETY.

Asiatic Researches, Vols. I—XX and Index, 1788—1839.
Proceedings, 1865—1904 (now amalgamated with Journal)
Memoirs, Vol. 1, *etc.*, 1905, *etc.*
Journal, Vols. 1—73, 1832—1904.
Journal and Proceedings [*N. S.*], Vol. 1, *etc.*, 1905, *etc.*
Centenary Review, 1784—1883.
Bibliotheca Indica, 1848, *etc.*

A complete list of publications sold by the Society can be obtained by application to the Honorary Secretary, 57, Park Street, Calcutta.

PRIVILEGES OF ORDINARY MEMBERS.

(*a*) To be present and vote at all General Meetings, which are held on the first Wednesday in each month except in September and October.

(*b*) To propose and second candidates for Ordinary Membership.

(*c*) To introduce visitors at the Ordinary General Meetings and to the grounds and public rooms of the Society during the hours they are open to members.

(*d*) To have personal access to the Library and other public rooms of the Society, and to examine its collections.

(*e*) To take out books, plates and manuscripts from the Library.

(*f*) To receive *gratis*, copies of the *Journal and Proceedings* and *Memoirs* of the Society.

(*g*) To fill any office in the Society on being duly elected thereto.

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